

Battlefield Medicine: A New PERSPECTIVE

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The United States military is the foremost fighting force in the world today. We have the most modern weapons systems and the most sophisticated delivery techniques known to man. However, Soldiers continue to die on today's battlefield the same way they died during the Civil War. While we have made tremendous advances in modern medicine, we have not figured out how to keep people from being killed in combat.

The Army Medical Department (AMEDD) spends a great deal of money improving our medical capabilities in training and equipment for Soldier care at echelons II and above, (new digital X-ray, surgeons farther forward than ever before), but little has been done to improve the treatment and outcomes at the point of wounding. We know that 90 percent of all combat deaths occur before a casualty reaches a definitive medical facility, and if the Soldier survives long enough to reach definitive care his or her chances of survival are excellent.

There needs to be a shift in our thinking; the days of not providing self-aid and lying there and yelling "Medic" are over. We must have the ability to assess our own wounds, provide self or buddy aid if needed, and continue the mission if able. The bottom line is the Army needs Soldiers who are equipped and trained at the point of wounding to decrease preventable battlefield death. This strategy will increase the unit's combat effectiveness and its survivability.

If we could make some minor changes in our common Soldier medical skills training, we could improve the survival rate of 15-20 percent of all battlefield deaths.



Sergeant Vernon Freeman
A Soldier with the 2nd Battalion, 6th Infantry Regiment renders aid to a team member with a simulated gunshot wound during urban combat training in Baghdad, Iraq.

"It is difficult to emphasize sufficiently the importance of initial treatment on the battlefield. What the wounded Soldier does on his own behalf, or what his infantry colleagues do for him, and what the company aidman does for a traumatic amputation or a gaping wound of the chest, in the thick of battle, in the dust and heat or in blowing snow — on these simple procedures depend life and death... A slight improvement in the skill and judgment of the company aidman will save... more human lives than will the attainment of 100-percent perfection in the surgical hospital."

— Lieutenant Colonel (Dr.)
Douglas Lindsey,
Presentation to the Army Medical
Graduate School 1951

That is the objective of this article.

Statistical analysis of battlefield deaths show that Soldiers die from the following wounds:

- Penetrating head trauma — 31%
- Uncorrectable torso trauma — 25%
- Potentially correctable torso trauma — 10%
- Exsanguination (blood loss) from

- extremity wounds — 9%
- Mutilating blast trauma — 7%
- Tension pneumothorax (collapsed lung under pressure) — 5%
- Airway problems — 1%

Many of the above wounds are not survivable even with a fully staffed hospital present at the site of injury. However, the three leading causes of preventable battlefield death are: extremity hemorrhage, tension pneumothorax, and airway problems. We currently train our medics as well as our combat lifesavers (CLS) to treat these conditions, but it is conceivable that they will not be available when a Soldier is wounded. If a Soldier has an airway problem or major hemorrhage, he has only a few minutes to correct that problem before he is beyond help. We should train and equip every Soldier to respond to these injuries as well.

The 75th Ranger Regiment has done just that with all of their Soldiers. The Ranger First Responder Course trains every Ranger to provide basic lifesaving care in specific tasks. In addition, they have provided additional medical training (EMT) for some squad members to help improve Soldier survivability. They have placed medical equipment throughout the squad

and trained their warfighters to use it effectively. Each squad carries a SKED® or Talon® litter for evacuation, and every Soldier carries a hemorrhage control kit. Certain individuals in the squad also carry additional IV fluids. This allows each squad to be self-sustaining and supplements the supplies carried by the combat medic. It also allows Soldiers to begin treating life-threatening conditions until more experienced care arrives.

The critical tasks involved in the Army First Responder Course would consist of:

- ☞ Conducting a rapid patient survey (ABCs — airway, breathing, circulation);
- ☞ Inserting a nasopharyngeal airway and placing the casualty in the recovery position;
- ☞ Treating life-threatening chest injuries with an occlusive dressing and performing a needle chest decompression if necessary; and
- ☞ Controlling external bleeding using an emergency trauma dressing and/or a tourniquet.

Training each Soldier to perform these four tasks can help reduce the killed in action (KIA) rates and reduce the battlefield mortality by 15-20 percent. These simple tasks can be taught during basic training and reinforced annually by common task training (CTT). In addition, refresher training can be conducted prior to deployment. Organic medical assets can conduct training easily in the unit area. Leaders must take the initiative to mandate this training for all of their Soldiers whether they are combat arms or support.

When we send Soldiers into combat, there is always a risk of injury. We can mitigate this risk by ensuring proper medical training for our Soldiers. They must be proficient in lifesaving skills as well as combat tasks. Casualty play and the use of lifesaving medical skills need to be incorporated into all training exercises. If leaders are not trained to expect casualties during a mission, how will they learn to handle

“If during the next war you could do only two things, namely (1) put a tourniquet on, and (2) relieve a tension pneumothorax, then you can probably avoid between 70 and 90 percent of all the preventable deaths on the battlefield.”

— **Colonel (Dr.) Ron Bellamy**,
Army Trauma surgeon who has completed
extensive research on combat casualties

these victims when they arise? Casualty scenarios in combat usually entail both a medical problem and a tactical problem. We want the best possible outcome for the Soldier and the mission.

Providing training for organic medical assets is also an area that needs emphasis. New philosophies on how to care for casualties in combat have been developed and taught in the Special Operations community, and have effectively saved lives in both Iraq and Afghanistan. Tactical combat casualty care is appropriate for all units

engaged with the enemy and has been approved by the American College of Surgeons and the National Association of Emergency Medical Technicians. Unlike civilian training, which deals with noncombat situations, this course offers realistic training in tactical medicine. The most important aspect of caring for trauma victims on the battlefield is well thought out planning for that environment and appropriate training of combat medical personnel. Good medicine can sometimes be bad tactics. Bad tactics can get everyone killed and/or cause the mission to fail.

Commanders need to put this medical training on the training schedule, get the medics out of the motor pool and allow their organic medical officers to upgrade their skills. Evaluate their competency on the same schedule as you do basic rifle marksmanship.

In addition, a new first aid kit for individual Soldiers will need to be developed to accommodate additional supplies needed to save lives. This kit (Figure 1) will need to consist of a tourniquet, a nasal airway, a 10-14-gauge 3-inch needle and catheter unit, and an emergency trauma dressing (not the old battle dressing). These supplies will allow every Soldier to be equipped to treat the three most common causes of preventable death on the battlefield.

These changes can only come about with the interest and enthusiasm of the Army’s leadership. Battalion, brigade, and division commanders need to implement this training in all of their units. Empower each individual Soldier to save his or his buddy’s life by initiating lifesaving skills on today’s battlefield. Incorporate “Tactical Combat Casualty Care” as the standard for providing care in combat. Ensure your medics are as well-trained and proficient as your warfighters. These are simple principles that can be incorporated into our daily business that will help to mitigate the risks associated with sending Soldiers into harm’s way.

Figure 1 — Individual First Aid Kit



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