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set the battalion up for future success.

In addition, the battalion Master Marksman could help make the marksmanship training safer, more realistic, and more cost effective in several ways. First of all, a constant focus on the use of weapons would make marksmanship training safer. Soldiers who have weapons in their hands all the time tend to be more comfortable with them. Soldiers with a solid understanding of the functions and capabilities of their weapons are more confident with them. Fully versed in the limitations and capabilities of his weapon system, a soldier is more prepared to execute safer more realistic LFXs. Coupled with a regular shooting regime, a superbly confident and safe marksman will emerge.

Engaging the enemy in combat will not be done from behind two sandbags, nor will it be from a culvert buried in ground overlooking a perfectly manicured range. This is not realistic, and our training should reflect the threat. As more of the world becomes urban-

ized, the distance and reaction times of our engagements will decrease. Our marksmanship training should reflect this as well. In the city or the jungle, a light infantryman's fight starts at his muzzle. He may be prone, kneeling, or standing, all in a matter of seconds. Realistic marksmanship training encompasses those scenarios. The battalion Master Marksman would enforce reality, insisting that units train for combat marksmanship—training as they fight.

A light infantryman must qualify twice a year, which requires 160 rounds of 5.56mm. At 22 cents a round, this amounts to \$35.20 per man per year. If a soldier hits the target only 100 times, that is a loss of \$13.20 in training funds. Multiplied by the 600-man strength of a light infantry battalion, the loss comes to \$7,920.00. Taking this analogy even further, let's look at the company LFX, including breaching the wire to clear a trench and bunkers: Each rifleman starts with 210 rounds, M249 gunner with 600, and M240B gunner with 900.

When it is added up, nearly 30,000 rounds will be expended. If only half of these rounds hit targets, are we truly getting the best use out of our training dollars? In the beginning, a battalion Master Marksman program may use up more ammunition, but over time a command focus on marksmanship training will save training dollars. During the Gulf War, for example, effective marksmanship in the mechanized divisions was attributed to a Master Gunner Program.

Looking at it from another angle, consider all of the training, leader development, and material costs involved in putting a soldier out on the line. We owe every one of our soldiers a fighting chance to survive in combat. If he can't hit what he's aiming at, we as leaders have failed.

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**Sergeant First Class Kenneth E. Wolfe** is an Infantry platoon observer-controller at the Joint Readiness Training Center. He previously served 11 years in the 75th Ranger Regiment and more than two years in the 101st Airborne Division.

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# Medical Evacuation and Training During Ranger School

CAPTAIN MARC CLOUTIER

*It's Day 9 of the 10-day field training exercise (FTX) conducted at the 6th Ranger Training Battalion (RTB), the final exercise of Ranger School. For the past eight days the Ranger students have averaged only two hours of sleep per day. A platoon of 40 Ranger students walks through the swamps along the Yellow River on the Florida Panhandle. The illumination is zero and the nearest road is an unimproved trail two kilometers away, with the Boiling Creek to their back. Suddenly a water moccasin bites one of the Ranger students. Without hesitation the Ranger Instructors (RIs) assess the situation and request a*

*medical evacuation (MED-EVAC) helicopter for the student. Within 20 minutes the student is extracted from the swamp and is at the Eglin Air Force Base emergency room for treatment.*

Today, the 6th Ranger Training Battalion, responsible for the Florida Phase of Ranger School, is expertly supported by aircrews from the XVIII Airborne Corps. The battalion trains MEDEVAC systems and scenarios at least 15 times a year. This training is broken into four different categories: MEDEVAC systems rehearsals, quarterly MEDEVAC training, annual interagency mass casualty (MASCAL) exercise, and student MED-EVAC operations.

**MEDEVAC Systems Rehearsals.** Systems rehearsals are conducted on the fourth day of each Ranger Class—11 times over the course of a year. The first system to be tested is a jungle penetrator (JP) hoist of a 200-pound dummy off a safety boat on the Yellow River. Before any student conducts waterborne training, this rehearsal is conducted to verify that aircrews, flight medics, boat operators, Ranger medics, and tactical operations center (TOC) personnel can safely extract a casualty from the swamps.

Following the hoist rehearsal, one RI walking team, consisting of four instructors, initiates part two of this sys-

tems rehearsal. Each cycle, a new FTX day is tested. It may be an airborne operation, a waterborne accident, or any number of simulated injuries in remote areas of the Eglin training area. This rehearsal tests MEDEVAC procedures at all levels. An evaluator records significant events, a medical evaluator records actions taken by the RIs to treat the casualty, and the battalion S-3 evaluates the primary instructor (PI) team on actions taken upon notification of a MEDEVAC. As in all Army training, an after-action review (AAR) follows the event, involving commanders, air crews, walking teams, medics, and evaluators so that lessons learned can be captured and new procedures developed, if necessary. One of the most difficult types of evacuation, and the most common in a swamp environment, is the JP hoist—an event we always try to incorporate into the systems rehearsals.

**Quarterly MEDEVAC Training.** Quarterly MEDEVAC training allows company commanders to train multiple walking teams in the procedures for treating and evacuating a casualty. It also gives air crews invaluable and realistic training. Quarterly MEDEVAC training focuses primarily on the use of the JP hoist or SKEDCO litter hoist from the swamps. Instructors and crews train both day and night scenarios involving a casualty requiring immediate extraction. This training realistically replicates hazards that might occur during upcoming cycles. Hypothermia treatment and evacuation is the focus before winter cycles, and heat stroke and snakebites are most common before spring and summer cycles, but there are always added injuries or surprises to prevent complacency on the instructors' evaluation and treatment of the casualty.

**Annual Interagency MASCAL Exercise.** Once per year, the 6th RTB hosts an interagency MASCAL that involves all agencies in the Eglin community, including local hospitals, law enforcement, and fire and rescue personnel. The MASCAL scenario is developed to be the worst case the 6th RTB would have to encounter and overcome. The scenario is driven by unforeseen factors

that cause all elements of the local safety network to be activated and trained.

The annual MASCAL exercise gives several separate agencies an opportunity to conduct MEDEVAC training. In addition to Ranger assets, joint MASCAL exercises involve local emergency medical services from two counties, the local fire department, five local hospitals, the news media, and Eglin AFB's Disaster Control Group.

**Student MEDEVAC Operations.** Ranger School is designed to train small and large combat arms unit leaders and, more importantly, give them the tools and ideas to take back to their parent units and use in training their own soldiers.

In addition to ambushes, raids, and waterborne operations, 6th RTB sends the Ranger graduate back to his unit capable of incorporating MEDEVAC training as an integral part of battle-focused training. Each of three Ranger training companies routinely conducts MEDEVAC training scenarios during the ten-day FTX. The treatment and evacuation of simulated casualties occurs without notice to the student chain of command, and often requires evacuation by use of the jungle penetrator. Ranger instructors assist students in the proper procedures for a JP extraction, as the procedure itself is difficult and potentially hazardous.

During numerous training events, AARs have brought to light many procedures that save time and prevent confusion. One challenge encountered during MEDEVAC training in the swamps and dense vegetation is signaling techniques. Both the ground personnel and the aircrews must understand each others' signals. Our far recognition signal both day and night is FM communications and a red star cluster (red pen gun flare if the star cluster is not available or is a dud).

When the pilots or our TOC indicate that the aircraft is one minute out, the walking team members fire their star cluster. Smoke, our intermediate signal, is thrown immediately after the star cluster is fired because it takes time to billow and crest the canopy of trees. We use red smoke by day and a white

strobe light by night. As the aircraft approaches, it will indicate by FM radio if the smoke or strobe is visible. When the aircraft is within 200 meters of the casualty, the white strobe must be turned off so it does not create a hazardous situation for pilots flying with night vision goggles (NVGs). If the pilots are having a difficult time identifying the signals, FM communications with a clock direction and distance are used to direct the helicopter to the location.

The near signal used by day is a VS-17 panel, which marks where the hoist or helicopter should land. The near signal at night is a swinging red chemical light tied to the end of a two-foot section of 550 cord. If this signal is swung vigorously overhead, the pilots can readily identify it at night. When the aircraft is overhead, FM communication from the ground to the aircraft must cease. At this point the aircraft is relying on instructions from his crew chief and is busy trying to maintain control of the aircraft in a hover. The added radio communication only aggravates an already challenging situation for the pilot. Also at this point, any white light being used to treat a casualty on the ground must be extinguished as this creates another dangerous situation for pilots flying under NVGs. (If light is critical, a red or blue lens filtered light can be used.)

Finally, during a hoist mission, signals must be used to relay when a casualty is ready to be raised. Only one person should give the signals. During the day, a simple thumbs up overhead is all that is required. At night, the same red chemlite on two feet of 550 cord again lets the crew chief know that the casualty is prepared for the hoist. Since the flight medic will first be lowered to the ground to continue treatment of the casualty, he becomes the primary signalman for the hoist. The flight medic also has FM communications with the aircraft. We also have the aircrew activate a red chemlite and attach it to the jungle penetrator during training. This enables the aircrew and the personnel on the ground to see the hoist as it is lowered to help maintain situational awareness.

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Although the JP is the primary means of extraction from the swamp, cross training on the SKEDCO litter is essential for cases involving a back or neck injury. During 6th RTB's most recent training, the flight medic was prepositioned at the extraction location on the ground where he was able to conduct training on the actual terrain where a hoist mission is most likely to become necessary.

We learned several lessons from this training:

First, a SKEDCO should not be used when extracting a casualty from the swamp if a JP will suffice. The dense vegetation of the swamps made it very difficult to find an area large enough to use the SKEDCO. Cable awareness is paramount, especially in night opera-

tions. The cable can easily become entangled with the ground team and cause serious injury. Signals should be made by only one signalman; more than one creates too much confusion and can be dangerous. Rigging a patient for a SKEDCO hoist while under the rotor wash is detrimental to both ground personnel and air crew. Once the necessary equipment is lowered, signal the aircraft off into an orbit, and have the flight medic call the aircraft back overhead once he is ready to extract. Safety goggles and a kevlar helmet help protect the ground crew and the patient from dead-fall blown down by the rotor wash.

Through constant training and evaluation, MEDEVAC training has paid big dividends for our soldiers. Our Ranger

Instructors are now more proficient in MEDEVAC operations, which has translated into better MEDEVAC training for the Ranger students as well. It has also provided the Florida Phase of Ranger School with a stronger safety net in the event we do encounter injuries that threaten life, limb, or eyesight. By dedicating effort and enthusiasm to our MEDEVAC training, we have developed—and continually revalidate—techniques that ensure better, safer, and more realistic training for the Ranger students and cadre of the 6th Ranger Training Brigade.

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**Captain Marc Cloutier**, when he wrote this article, was S-3 Air of the 6th Ranger Training Battalion, at Eglin Air Force Base, Florida.

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# Integrating Medical Training Into Company Warfighting Training

CAPTAIN LAWRENCE O. BASHA

When an infantry officer takes command of a company, he wants to make it the best fighting force possible. Many of us know how to develop the maneuver aspects of training, but we may not be sure how to improve other areas that support the company's ability to fight.

One essential support skill is the ability of trained combat life savers (CLSs) to perform medical tasks. The training and evaluation of medical personnel is the responsibility of the battalion medical officer. The company commander, in turn, can use the medics to train and evaluate his infantry personnel. This article provides suggestions on how the company commander can improve soldiers' CLS skills.

Any good infantry commander knows the value of correct and timely first aid on the battlefield. The Bellamy Analysis of casualties in World War II, Korea,

and Vietnam—a major, comprehensive study of wound effects—found that 80 percent of combat deaths occurred in the first hour after injury. Of these casualties, 50 percent bled to death, half of whom could have survived if the bleeding had been stopped. Saving lives is the fundamental reward from a good medical training program.

Improving life-saving skills yields other benefits as well. An individual soldier gains confidence when he can perform the actions that he knows will save lives, and when he has truly mastered a skill he can use anywhere and any time. Units gain confidence going into battle, knowing that they will be cared for by the soldiers around them. Soldiers will fight harder when they know there is good, competent care and an evacuation program to take the wounded back to a dedicated care giver.

These are not easily quantifiable benefits, but they are important and a good commander will work to improve them.

## Ranger CLS Training: A Case Study

The results of a good CLS program are impressive. Recently, I observed a platoon raid conducted by 3d Battalion, 75th Ranger Regiment. A fire team was providing security in an intermediate support-by-fire position. A medical observer-controller (OC) came up from behind and assessed a casualty on the fire team—a Ranger was given a shoulder wound. The OC put a laminated index card specifying the injury on a 550-cord loop around the Ranger's neck. The combat life saver with the CLS bag went to his aid. He prepared the injured Ranger and applied the proper bandages. Without looking up,