THE 399TH: MISSION TO HEAL

In Iraq, 'it's us versus death'

Mass.-based unit on constant call

By Colin Nickerson, Globe Staff | December 31, 2006

MOSUL, Iraq -- The alert hit the 399th like a shot of pure adrenaline.

"Attention on the compound," crackled the public address system. "Mass-Cal. Mass-Cal. Mass-Cal."

Mass-Cal: Military slang for mass casualties. Inbound on medevac helicopters. Due in minutes. All medical staff to the hospital. *Now! Now! Now!*

Already the throb of distant rotors was audible from the west. Getting louder by the second. "Three birds," said Lieutenant Colonel Mike Kolodziej, 49, of Keene, N.H., officer in charge of the medical unit's tactical operations center, which provides intelligence and forecasts of impending emergencies. "A dozen cals."

Medics were pounding down the concrete walkway to the hospital. Doctors were snapping on face masks and surgical caps. And nurses were breaking out trauma kits and hooking saline bags to IV racks. In the lab, Lieutenant Colonel David De Haas, 51, of Mount Desert, Maine, was readying red blood cells and plasma -- and already considering whether to contact Baghdad for emergency resupply by air.

The mass casualty call to action is the most dreaded in combat medicine. For sheer heart-cracking urgency, its only rival is the siren blare that warns of imminent incoming shellfire or rockets. Since arriving in Iraq in early October, the doctors, nurses, medics, and techs of the 399th Combat Support Hospital, a Massachusetts-based Army Reserve unit, have become intimately familiar with both signals.

They've handled scores of hideously wounded casualties so fresh from the battlefield that the stench of explosive still clings to skin and red-hot fragments of shrapnel sizzle and pop in torn flesh. And they've scrambled for cover behind sandbags or into concrete bunkers to the soul-jarring whump of mortar rounds "walking" the compound, and the rip-roar of automatic weapons at the far perimeter wire.

"You listen for sounds like you've never listened in your life," said Captain Kathy Ryland, 42, a trauma nurse from Camas, Wash. "You learn fast to recognize the difference between a shell blast that's too near and one that's too far away to matter. You live by speed because you can die by slow. That's true for saving our patients. That's true for saving ourselves."

They've treated young American soldiers punctured by bullets. They've treated the insurgents who pulled the triggers. They've treated Iraqi police cut down by roadside bombs. They've treated school kids blown up for what's become the cardinal sin in this suffering land -- being in the wrong place at the wrong time.

Months after arriving in Iraq, some members of the unit are still coming to grips with their violent new reality.

"Before I came in-country, I'd hardly even seen a bad cut," said Specialist Judy Phothimath, 25, of Lowell, a patient administrator. Since then, she's seen buckets of blood mopped from the emergency-room floor and taken information from soldiers with bones protruding from blast wounds. "I've tagged the toes of dead men and zipped their bodies in bags. It's pretty emotional. It's a pretty wild ride."

Still, most of these healer-soldiers have found what they call their "battle rhythm."

Said Colonel Bryan R. Kelly, 52, of East Sandwich, commander of the 399th: "We've gotten very focused, very quickly. We understand where we are and why we're here -- in a war zone, to save lives. For us, all the other issues of this conflict are incidental."

Triage: The grimmest call

Now, on this day in late November, medevac choppers flown by Charlie Company, Third Battalion, 25th Infantry Division, were settling thunderously onto the landing zone just outside the shrapnel-scarred, single-story former airport structure converted into a combat support hospital. Mosul, in northern Iraq, is battered by all the miseries of the country's civil war. Fighters loyal to Saddam Hussein and wrathful radicals invoking their version of Islam attack American troops. Or ambush police and soldiers of the US-backed government. Or slaughter defenseless civilians.

Borne on stretcher racks inside Blackhawk utility helicopters configured for medical use were the most critically wounded victims of a suicide bomb attack in Tal Afar, 40 miles west of Mosul. All 12 were Iraqi civilians, some barely clinging to life -- skulls pulped by shrapnel, skin seared by flame, internal organs raked by metal, lungs collapsed by concussive force, legs and arms nearly sheared by the blast.

There was an 8-year-old boy whose X-rays would reveal perfect tiny spheres lodged in his leg bones: Ball bearings that had been packed around the bomb's explosive charge to ensure maximum injuries, surmised radiologist Major R. Brian Heathcock. The boy would be OK, the docs would pull him through.

Had this been Boston, the injured would likely be divided among the city's four top-level trauma centers. Even then, such an influx would rate as a significant emergency, with backup specialists summoned from far and wide, and extra medical gear on standby.

But this was Iraq. This was the 399th Combat Support Hospital. Six emergency bays. Three operating tables. Twelve intensive care beds. Twenty intermediate care beds.

Twenty-one doctors, mostly surgeons. Six anesthetists. Thirty-eight registered nurses. Thirty-two licensed practical nurses. Twenty-seven medics. Eleven medical technologists. A hundred or so units of red blood and fresh-frozen plasma, a pair of CT scanners, a pharmacy heavy on pain killers, and racks of gleaming surgical implements. This was medicine at the rough and ready.

"We've got what we need, by and large, but not what we're used to at civilian trauma centers," said Lieutenant Colonel Joaquin Cortiella, a Harvard-trained pediatrician and anesthesiologist, a specialist in burn cases and the 399th's deputy commander for clinical services. "It can feel like working the high wire with no safety net. We're our own backup."

This combat support hospital and five others like it across Iraq receive the most horribly injured. The six hospitals are attached to Third Medical Command, responsible for all US military medicine in Iraq -- from dentists to mental health counselors to veterinarians caring for K-9 dogs. During its first three months on the ground, the 399th has endured repeated mortar strikes, rocket attacks, and a rare ground assault against the nearby main gate of Forward Operating Base Diamondback.

"There's nothing like a 4 a.m. mortaring for a wake-up," said Major Mark Edney, a urologist and general surgeon originally from Penacook, N.H. "It'll ring in your head forever."

And now litter crews from the 565th Medical Company, a unit assigned to the 399th, were rushing to the Blackhawks, unloading casualties and hustling them on wheeled stretchers back through the ear-splitting noise and stinging clouds of grit thrown by the rotor downblasts.

Outside the emergency room, all clothing was stripped from the casualties -- precaution against grenades and other booby traps planted by insurgents -- while a supervising surgeon made the grimmest of medical calls. Two of the wounded were pronounced "expectant," beyond any realistic hope of saving. Triage, used in dire emergencies, allows doctors and nurses to concentrate on the most critically injured by separating them from the mortally wounded and those in no immediate danger of death.

"It runs against the medical grain, writing off someone who is still alive," said Cortiella. "But it comes down to whether we're going to keep a hopeless individual alive for a few extra hours, or spend those same precious hours trying to stabilize someone with a real chance."

The dying were bedded in the 399th's clinic, which treats less-serious injuries on normal days but serves as a hospice during major influxes. The patients received pain killers, bandaging, warm blankets, and comfort.

"No one passes away without soothing words and the touch of a human hand," said Lieutenant Colonel Anthony Pasqualone, a nurse practitioner from Arlington. "We don't

turn our backs on the dying. We try to give them dignity. It's solemn. It's been rough on our younger soldiers, still unaccustomed to death. Some have tears in their eyes."

Hot welcome to Iraq

The 399th Combat Support Hospital consists of roughly 470 officers and enlisted personnel, three-quarters of them surgeons, nurses, medics, or lab technicians. One of the 399th's two companies and the command staff are based in Mosul. The 399th's second company runs a hospital near Tikrit, Hussein's birthplace, 125 miles south of Mosul on the highway to Baghdad.

Most soldiers of the 399th are from Massachusetts, Rhode Island, or Maine, but there are also contingents from Ohio and the Pacific Northwest. In all, 37 states are represented. "It's an American cross section," said Command Sergeant Major William Valliere.

The Mosul portion of the 399th took position on Oct. 11, beginning a year long deployment. The next day, the unit conducted a mass casualty drill. That evening, at chow time, insurgents delivered the real thing as 68mm and 82mm mortars slammed near the dining complex and into a motor pool next to the medical compound. Among the wounded were personnel from the 47th Combat Surgical Hospital, the unit handing over to the 399th.

"That was our welcome, a 13 mortar-round salute," said Colonel Edward Cyr, 54, a nurse anesthetist from Bristol, R.I. "It was pretty surreal to be in the heat of action so fast."

The 399th occupies a helter-skelter warren of containerized housing units and shipping containers crammed into a few acres at the edge of Mosul's main airstrip. The compound is surrounded by blast walls that resemble giant versions of the Jersey barriers used along US highways. Most structures are banked with sandbags. Some are draped by camouflage netting incongruously threaded with Christmas lights, winking merrily. The lights are for general cheer, not just the season.

People live two-to-a-room in tiny chambers outfitted with basic amenities: bunk bed, wooden desk, metal cupboard, and heating/air conditioning. Hot showers and flush toilets are in a prefab building at the center of the compound.

On their own dime, the medical soldiers can equip their rooms with televisions and personal computers fed by satellite links. Many have refrigerators and microwaves. Hospital staffers can't always make mealtimes at the main chow hall, a 15-minute hike down a road usually slick with mud or choking with dust. But standard supermarket fare -- from Campbell's chunky New England clam chowder to frozen enchiladas -- can be procured at the nearby PX, or base general store. Even closer to the hospital is a fly-ridden Internet cafe, run by an Iraqi entrepreneur, offering lattes, hot chocolate, and slow-speed connections. There's laundry service. There's an AT&T calling center.

"Being here is nothing like I imagined," said Phothimath, the soldier from Lowell. "I expected desert, maybe camels. Not living on the edge of a city, with stir-fry and salad bar at the mess hall. And bad guys just beyond the wire."

Five times a day, the muezzins' call to Muslim prayer floats from Mosul's minarets. But the city "outside the wire," as the soldiers say, is strictly off-limits except to combat patrols and military convoy drivers.

There are times so busy that some nurses and doctors will work 36 hours at a stretch, grabbing cat naps on a spare ER bed.

There are days so slow that the minutes and hours seem trapped in some sticky spiderweb.

"Our lives accelerate from zero to 100 miles per hour in nothing flat," said Lieutenant Melinda Nekervis, 30, a registered nurse from Millbury, "then just as quickly drop back to zero again."

To while away quiet stretches, the 399th watches football games at weird hours (Iraq is eight hours ahead of Eastern Standard Time), plays chess, drinks Beck's nonalcoholic beer, works out in a makeshift gym, smokes more cigars than entirely appropriate for a medical unit, grills chicken wings on a barbecue rig made from a split oil drum, and flips through magazines ranging from Nature to Cosmopolitan.

Anesthetist Cyr reads detective novels by Boston writer Robert B. Parker. "I don't really follow the plots, but the New England settings make me feel at home," he said. He also enjoys thumbing through a photo album thick with snaps of his wife; five daughters, ages 18 to 26; four cats and a corgi dog. Cyr misses his family, often desperately, but sees his year in Iraq as a matter of obligation.

"I've always felt a profound sense of debt and duty to my country," he said. "It's as much a part of my identity as loving my family."

In the 399th, political news from Washington is followed with roughly the same interest as the weather back home. People are mindful of polls showing plummeting support for the war, just as they are mindful that New England's weather has been unseasonably warm. But neither fact seems especially relevant to their reality.

"Good war, bad war -- history will tell," said Major Joseph Luz, 53, who practices family medicine in Schoharie, N.Y. "Meanwhile, it's our war. We're groping through the thick of it. Our soldiers are getting shot and blown up. We've got the skills to save them. That's what we're concentrating on."

Amid the onslaught of mass casualties, instruments bleeped vital signs, surgeons probed wounds, nurses punched needles into veins. The tile floor was slick with blood, littered with torn bandage wraps. Combat surgeons work like line officers. They scout the terrain

of riddled flesh, find a target -- the lacerated intestine, the nicked artery, the pulverized limb -- then attack hard with blade, clamps, and forceps.

"Surgery is the infantry of medicine, we fight it out in the blood and mud," said Major Matthew Hueman, 32, a West Point graduate and trauma surgeon from Walter Reed Army Medical Center in Washington, D.C. "Surgery is black or white, yes or no, stay or go, all or nothing."

The air was rank with odors of seared flesh and burned hair. Radios set to military frequencies squawked counterpoint to agonized shrieks and groans. Ventilators hissed, transfusers churned.

War injuries in Iraq are no worse than in any other war. But fast transport of the wounded and high levels of medical care close to battle zones mean people are surviving more terrible injuries than in past conflicts.

"OK, lift on three!" a surgeon told litter bearers about to hoist a patient onto an examining table. "One, two, *three*!"

"Oh Jesus," cried a bearer, barely in her 20s. The wounded man had been transferred smoothly. But he left chunks of skull, brain matter, and charred scalp on the olive-drab stretcher. "Oh Jesus God Jesus."

The surgeon shook his head. Not much to be done. Stop the bleeding. Severe brain injuries are generally too complex for combat support teams. Within minutes, the patient was bundled into a body bag for warmth and reloaded onto a chopper for the larger Air Force Theater Hospital in Balad, 170 miles to the south, for neurosurgery. He would survive an "unsurvivable" wound, at least for a few more days or weeks.

The scene in the emergency room looked to be chaos. But the reality was closer to choreographed jazz: Doctors followed scripted procedures and protocols, then quick-riffed to improvisation to repair ruptured vessels and shattered limbs. Every patient was surrounded by healers in green, blue, or purple scrubs. "Blood! Two units emergency release blood, now!" sang out Colonel William Myers, an orthopedic surgeon from Augusta, Ga., on his second combat tour in Iraq.

Myers and Major Dennis Callender, an obstetrician/gynecologist from Montana, were working on a patient whose leg was hopelessly mangled -- soon to be amputated -- and whose chest and abdomen were peppered with shrapnel hits.

Around the corner, in the intensive care unit, Major Jeffrey Mikita, 35, a pulmonary critical-care doctor from Washington, D.C., sutured bleeding near the lungs of a patient with multiple blast injuries. Nekervis, the nurse from Millbury, was cleaning another wound. "There's a big piece of sharp metal," she warned Mikita. "Watch your hands."

A third nurse dumped an armload of blood-soaked dressings into a maroon biohazard bag. A medic wheeled a patient with belly wounds and shredded arms into the crowded ICU. "Make room, make room," the medic cried.

Here a severed artery was clamped, there sterile cloths were packed into the yawning holes of "soft tissue" injuries. Bags of yellow plasma and red blood dangled from IV hooks. The scene was illuminated by bright surgical lights. A nurse struggled to insert a lung drain. A surgeon used his fingers to trace the terrible trajectory of metal through organs and entrails, trying to assess damage by sense of touch.

Said Colonel Joseph Blansfield, the 399th's chief registered nurse and, in civilian life, manager of the trauma program at Boston Medical Center: "Heard about the glory of war? You're looking at it. This is the ground truth."

And more bearers were carrying more casualties into the ER, even as surgeons cut into the flesh of the first patients to reach the operating room.

"X-ray, we need X-ray!" called Major Matthew Deeter, a surgeon wearing black rubber galoshes against blood spatter. The doctor leaned over a seemingly unconscious patient with shrapnel in his chest, burns on his face, and a immense chunk of right calf blown away.

"X-Ray coming through!" responded Private First Class William Lyons, 23, a medical tech from Worcester, as he maneuvered his portable rig into position, warning everyone to step back. "Stand clear -- X-ray!" The machine emitted a sharp electronic snap.

Suddenly, the patient sat upright, eyes wild, roaring his terror and pain.

Translator Kaniah Zangana, 49, one of six contract linguists with the 399th, materialized at the examining table, offering soothing words in Arabic. "Be calm. Truly you are in a place of safety," she told the Iraqi.

Zangana, a San Diego real estate dealer and a mother of five who emigrated from northern Iraq to Southern California 30 years ago, also sought information: "Have you any allergies? Are you on medications?"

But the wounded man was panicking, thrashing against catheter tubes and monitors, until painkillers kicked in and he flopped back onto the examining table. Anesthetist Captain Richard Del Sesto, 46, of Pawtucket, R.I., inserted a breathing tube, prepping the man for surgery.

Said Deeter: "There's lots of shrapnel in the chest. But it's hot and sterile" -- from the heat of the blast -- "so no prob, leave it. We'll get the bleeding under control and this patient should be all right."

Treating insurgents too

Ratios vary from medical unit to unit -- and from time to time, depending on the course of the war -- but in recent weeks only a quarter of casualties treated by the 399th in Mosul have been American. Most patients have been Iraqi police, or civilian victims of insurgent attacks, coalition weapons, or cross fire.

But badly wounded insurgents are also carried through the 399th's emergency doors.

The US military doctors and nurses struggle for the lives of these enemy fighters with the same ferocity and tenacity that American combat troops put into killing them. "Back home, hospitals treat a cop shooter just as they would a wounded police officer," said Captain Bertha Maloof, a registered nurse from East Bridgewater . "Same difference. Medicine doesn't take sides."

In mid-October, during a series of attacks on US positions near the hospital, insurgents assaulted the north gate of the Mosul base. An American infantryman suffered severe wounds in the firefight. So did an insurgent. Both were rushed to the 399th.

After hours of intensive surgery, the insurgent survived. The US soldier died of his wounds on a nearby operating table.

Combat medicine does, in fact, take sides. Said surgeon Hueman: "In the shooting war, it's us versus them. In the war we fight, it's us versus death. Our first allegiance is to the patient."

The only indication that a patient is an insurgent is that curtains are drawn on either side of his bed -- a measure partly intended to dampen tension and partly to prevent a foe from gleaning details about the precise layout of the hospital. American wounded, by and large, ignore the bandaged insurgents. By contrast, Iraqis wounded in insurgent attacks are often furious to find themselves being treated alongside their assailants.

"For Iraqis, it's shocking and frightening to find a radical so near. They say, 'Why is our enemy healing among us?' " said Zangana, the translator. "I just tell them -- it's the American way."

Saving lives, staying alive

In the sealed gray chamber of the tactical operations center, the 399th's sole classified facility, Lieutenant Colonel Kolodziej and his soldiers track the Iraq conflict on secret computer links, aerial shots from drone spy planes, hissing radios, and old-fashioned infantry grid maps. This is part of the medical war, the gathering of intelligence to keep the hospital updated on what to expect next in the way of casualties.

"If soldiers are going to be kicking in the doors of an arms cache at 21:30, we need doctors ready for the fallout," Kolodziej said.

Specialist Ari Goldschmidt, from Beaverton, Ore., presides over an array of radios whose reach varies from a few miles to the entire war theater. "When the birds are inbound, we

get detailed info on what sort of patients they are carrying, what sort of injuries they have. We want to get people into the hospital the quickest way possible, and make sure the clinical people are ready to handle specific wounds."

The tactical center also watches for insurgent activity in the vicinity of Mosul. When attacks come, sirens screech and the alert goes over the PA: "Bunkers, bunkers, bunkers! Incoming, incoming, incoming!"

A mortar shell that explodes near, but not near enough to imperil life or limb, still rattles bones and makes a terrifying blast. An incoming mortar landing near enough to kill makes a flat crack that slams the eardrums and squeezes air from the lungs. The burst seems almost to occur inside the brain. There's a gout of orange flame and hot metal slivering through the air.

With soldiers, mortal danger seems to bring out a flair for understatement.

"This isn't very nice," said First Sergeant Shirley Martino, a grandmother of five from Haverhill, after blast debris lashed the exterior of one of the bunkers -- basically just long concrete tubes with crouching space -- scattered throughout the compound.

In the same attack, one mortar round punched through the ceiling of a housing unit, smashing a bunk bed before tearing out the back of the prefab without exploding. Dud shell. The two occupants had bolted the room just moments before.

Another 68mm round exploded on the hospital roof, directly over the emergency room. It didn't penetrate the reinforced concrete, but gouged out a fair-sized hole and slashed some communications wires.

"In a blink, you could go from doing surgery on a patient to being that unlucky someone on the operating table," said Major Brian Vickaryous, 35, an orthopedic surgeon from Lake Mary, Fla. "Everyone is mindful of the danger. But you can only spend so much time worrying about yourself. Your main concern has got to stay with the patients."

On Iraq's medical front, doctors, nurses, and medics are saving lives at a dramatically higher rate than in any previous war.

Roughly 90 percent of American soldiers and Marines wounded in Iraq are surviving their injuries, according to medical studies. That compares with 75 percent in Vietnam. The key reason is speed -- fast first-aid techniques, including aggressive use of tourniquets, and chitosan bandages, impregnated with shrimp shells, that can stanch bleeding in 30 seconds. Then, fast evacuation from battle areas to hospitals near the front, such as the 399th. Here, the goal is stabilizing the wounded, as opposed to fully repairing injuries, a major shift in approach. After treatment at a combat hospital, US casualties are flown to more sophisticated medical facilities in Germany and the United States, often arriving within 36 hours of suffering their wounds.

"Most casualties who come through us hardly even know they've been here," said Major Paul Zaborski, of Rockland, Mass., head nurse of the 399th's intensive care unit. "We bring them out of immediate danger and get them to higher levels of care."

Iraqis wounded in the conflict, however, are only rarely evacuated from the country. It means they tend to stay longer in combat support hospitals, since US doctors are reluctant to release patients still in critical condition to Iraq hospitals, where the quality of care, availability of medicines, and even basic hygiene are markedly inferior.

"The Iraqi patients have to be made healthy enough to survive a big drop in care standards," said Zaborski.

The doctors, nurses, medics and techs in blood-splotched scrubs were still toiling over the casualties trundled off the Blackhawks that day in late November.

Scrawled in Sharpie ink across the stomach of one patient: "Shrapnel in spine!" A medic on the incoming bird had written the warning on the best chart available. Meanwhile, full-bore surgery was underway in open bays throughout the hospital, since its two operating chambers were jammed.

In the ER, the blast-torn patient lying in front of Hueman and a vascular surgeon, Lieutenant Colonel Sung Kwon Kim, had barely measurable blood pressure and almost no heartbeat. He was essentially gone. But the docs weren't ready to surrender.

Hueman made a lateral cut across the man's chest, cracked through the ribs, and tried to jump-start the heart by hand. The desperate massage failed. "He's dead," the surgeon finally conceded in a flat voice. "That's that."

For a moment, Hueman seemed lost, stunned. He stripped off his bloody surgical gloves and tossed them toward a trash bin, shaking his head when the latex tangle missed the target.

He took a deep breath, eyes focused nowhere. Then snapped on another pair of gloves. And turned to the next patient.

This blast victim, too, had fading vital signs. Hueman pressed the abdomen, could feel dangerous swelling of the liver from internal hemorrhaging. Thought, *oh-oh.* Shrapnel had severely lacerated the organ and caused other critical internal damage.

Surgery: All or nothing. Yes or no. Stop or go.

"OK, let's open this guy," Hueman said.

Immediately he was joined by Lieutenant Darrin Pohlman, a critical-care nurse for surgical assistance. Trauma nurse Ryland packed the wounds with clotting cloths. Anesthetist Captain Rich Jacobson fine-tuned the flow of knockout drugs. Other nurses

and doctors lent their skills. After more than an hour of touch-and-go surgery, the 25-year-old Iraqi patient's vital signs were back in normal range.

Of the dozen wounded rushed to the 399th that day, three died, including the two rated beyond hope on arrival. The brain-injured man flown to the Air Force hospital for neurosurgery remains comatose. The other eight patients were stabilized, likely to heal.

"Losing a patient is terrible. It's like losing a piece of yourself," said Hueman. "But when you pull a patient from the brink, the feeling is almost indescribable. You've won the battle that counts where we fight. So you feel elation -- for a few minutes, anyway. Then you go back to the war."

This is the second in a series of occasional articles following the 399th's deployment to Iraq. The first article appeared Aug. 27. ■