

AIR EVACUATION
Traveling With USAF
Air Mobility Command Aeromedical Evacuation Teams - 2009

I will be traveling with air evac teams flying air evac missions into Iraq, picking up American wounded and starting them on their way home.

My goal in this article is to put you with U.S. Air Force medical evacuation crews as they fly “down range” into Balad, Iraq – fly our wounded out of Iraq to the U.S. Air Base at Ramstein, Germany – deliver the wounded from the tarmac at Ramstein to the U.S. military hospital in Landstuhl, Germany for stabilizing treatment – and then fly those same wounded on to Andrews Air Force Base just outside of Washington. This entire med-evac process for one of our wounded (from the battlefield to the States, with a stop for treatment at Landstuhl) typically takes three or four days.

Air Evacuation

The U.S. can now save the lives of more of its war wounded than in any other war in the nation’s history. The reasons for this are many – highly committed physicians and nurses, improved protocols and treatments for penetrating wounds and severe burns, the use of large quantities of whole blood in field hospitals, an excellent medical records system, and fine medical facilities in the war zones and at Landstuhl. But, all the above are not enough to give the U.S. the survival outcomes it achieves. The remarkably high survival rate for our war wounded depends on an air evacuation system that begins on the battlefield and operates all the way to the States.

Every day of the year, virtually no matter the weather or the risk of flying in a combat zone, U.S. air evac teams airlift the wounded off the battlefields of Iraq and Afghanistan to military hospitals near the battlefields. And, then, if medically necessary, other air evac teams fly the wounded out of Iraq and Afghanistan to the U.S. military hospital in Landstuhl. After treatment at Landstuhl, often for only a day or two, the most seriously wounded are air-evac’d home.

Since 2001, the year America first sent troops into Afghanistan, American’s most seriously wounded in the wars in Afghanistan and Iraq have been air evacuated from the war zones to the military hospital in Landstuhl. As a result, Landstuhl has become not only the busiest trauma hospital in the world, but also one of the finest trauma hospitals in the world.

The daily effort, courage and sacrifice of these air evac teams mirrors the effort, courage and sacrifice of our troops on the ground.

Scott Air Force Base

I have come to Scott Air Force Base just outside of St Louis to catch an Air Force C-17 to the U.S. Air Base at Ramstein. Captain John Stock, a public affairs officer for the Air Force, joins me for the trip. Captain Stock will act as my escort and see that I get to where I am supposed to go.

After a few hours sitting in the small departure lounge at Scott, we and some waiting military personnel, including several families with children, board a shuttle for a short drive to a dark strip of airfield. There a huge, gray-green and quite stately C-17 waits, its stairway lowered to the tarmac. The C-17 is a giant, but

it is a well-sculpted and lovely giant. It has a slightly bulbous head, a body shaped like a subway tunnel and a soaring tail fin. The underside of the plane's fuselage ends in a slope that rises up toward the tail fin. The slope is, in fact, a ramp that can be lowered to the ground to discharge troops and vehicles.

Standing on the empty tarmac beside the wing and looking up at the nearly four story tail fin reminds me of once standing at Mesa National Park and admiring the sweep and beauty of the stone rising to the sky.

The C-17 is a work horse. It can take off with a belly full of soldiers, their gear, and an Abrams tank; or, it can deliver an airborne parachute brigade to a drop zone. This is the plane that does the bulk of the work evacuating our war wounded. It can carry thirty-six litters, stacked three high in two rows that are each six litters long and that run along the length of the plane. If necessary, more litters can be set up on the jump seats fixed to the walls of the plane or on the ramp at the back of the plane. Litters are only laid on the ramp when there are a large number of wounded, or to speed loading if the plane is under fire or in a nonsecure landing zone.

The jump seats along the walls can carry 50 or so ambulatory patients. These seats are small and tightly packed. They are not comfortable, and leg room is restricted since the first row of litters is only a few feet away. A flight nurse standing with me and waiting to board tells me of flights during the worst fighting in the Iraq war when wounded soldiers and marines in combat gear filled all thirty-six litters and every jump seat. Only the critically wounded got a litter. She took several flights that carried this many wounded, and tells me that the wounded in the jump seats somehow managed to never complain.

A late January wind pushes us from the shuttle toward the stairway to the plane. A young mother in uniform stands at the foot of the stairway saying goodbyes to her husband and children who will stay behind. Other military parents, those stationed abroad, board the plane with their children.

Soon after we board, two air evac teams arrive and immediately and efficiently stow their voluminous gear, including stretchers, monitors, medical supplies and medicines. Clearly, they have done this before. All the young children traveling on this flight, and I, are impressed by the process.

A standard air evac team consists of flight nurses, all of whom are officers, and medical technicians who are in the enlisted ranks. The ratio of men to women in our two teams is about even. No one enforces military discipline on the plane. The air evac teams, irrespective of rank, lug around equal loads of gear.

One of these two evac teams will land at Ramstein, immediately take responsibility for wounded who have been treated at Landstuhl, and then board those wounded on another C-17 and fly them back to Andrews Air Force Base. From Andrews the wounded will be taken to the Walter Reed Medical Center.

Captain Scott and I will be spending the night in Germany and then travelling tomorrow with the second medical evac team from Ramstein to Balad Air Base, Iraq. At Balad, this evac team will pick up injured military personnel and bring them back for treatment at Landstuhl.

Flying to Ramstein

Except for the gear stored by the evac crews, our C-17 is an empty, cavernous half-circle. A two stall portable toilet sits at the front of the plane, just behind the stairs leading to the cockpit. A five or six foot square, dark green container of medical supplies, stamped with a prominent red cross, is strapped to the

plane's floor at the rear of the plane, at the point where the floor slopes up at a slight angle towards the plane's tail.

The flight crew hands out ear plugs as the two-horsepower engines roar alive. The evac teams and we other passengers strap into the black canvas jump seats arranged in rows of about twenty-five each along both sides of the plane's fuselage. The jump seats face each other across the broad, empty center of the C-17. Tonight, with only its flight crew, two medical teams and a few others on board, the plane lifts quickly. The whine of the engines, and the thrust of takeoff, send ripples through your stomach and chest.

When we reach cruising altitude, one evac team sets up patient litters (stacked three high) in the center of the plane, breaks them all down and then does it again. Their commander, a woman nurse with a rank of major, huddles them like a ball team before they start, then they break huddle and go to it. Today is practice, tomorrow is for real.

Within an hour or two of takeoff, and taking our cue from the evac teams, most of us arrange a sleeping bag on the floor and crawl in, winter coats still on. Several air evac nurses sleep on the lowest of the stacked litters. The steel floor is cold and sleeping bags are necessary if there is to be any hope of sleep.

The floor of a C-17 is pitted with dozens of places to hook anchor bolts for heavy cargo, and smaller slots to tie down the supports that hold the litters for the wounded. It is a restless and cold night without a pad under your sleeping bag. The C-17 is not well insulated for noise, so earplugs are a big help. As a result, you cannot easily hear anyone who is not shouting directly at you from within spitting distance. The night passes cold and noisy, though I sleep fairly well.

Come early morning German time, the cabin lights are on and we pack up sleeping bags and gather gear. The med evac teams have avoided any formality during the flight, but as we prepare to land, things change. Caps go on, jackets and blouses are buttoned and once we hit the ground salutes are back in order.

It is a cold January morning in southern Germany, with a weak sun occasionally filtering through the clouds. A light breeze swirls along the tarmac as we exit the C-17 with our gear and climb into forest green military vans that bring us to the main terminal.

Ramstein Air Base

Ramstein Air Base is in a long and shallow valley surrounded by farm land and small villages. The air field stretches down the long axis of the valley. At one side of the valley, to the south and across a tarmac scattered with C-17's and a few of the even larger C-5's, is a ridge of red sandstone cliffs covered in pines. Nestled into a cleft in the ridge, only a couple of miles from the airstrip, is the small town of Landstuhl.

The sandstone cliffs rise a hundred feet or more above Landsthul, cradling the town in their grasp. One end of the town opens onto the fertile valley and the distant airstrip. Behind the town a road snakes uphill past a small stream that cuts a path through the cliffs.

A ruined fortress built of giant sandstone blocks rises from the tallest of the cliffs above Landstuhl. The fortress was built around 1160 by Barbarozza (the Red Beard), enlarged over the centuries, and won and lost in various wars between German princes, It was the site, in the mid-1500's, of one of the last battles involving knights in armor when the castle's defenders were overrun by the army of the Archbishop of Trier. In the late 1600's, the castle was destroyed as a fighting fortress by the French.

On the cliff opposite this broken relic of forgotten wars, and directly across the rooftops of centuries old homes that hug the lower slopes below the castle, is the U.S. military hospital, the Landstuhl Regional Medical Center.

Earlier today a C-17 left Ramstein with an air evac team and a badly burned soldier being air evacuated to Brooks Army Medical Center in San Antonio. Brooks is where the military operates its leading burn unit. The soldier was to have been evacuated to the States two days ago, and then yesterday. But, the burns made the soldier too fragile to move before now. This morning's flight to San Antonio is one of the continuous air evac flights from Ramstein to the U.S., most often to Andrews Air Force Base, just outside of D.C. At Andrews, patients are picked up by a medical team, and in most cases taken to Walter Reed Hospital.

In addition to handling air evac flights, Ramstein also sends transport flights "down range" to Bagram, Afghanistan and to our destination, Balad Air Base, Iraq.

Walking through Landstuhl this morning, I could not ignore the irony of an ancient, stone fighting fortress, and a modern hospital, on the opposite cliffs that frame Landstuhl. The contrasts of cut stone and of new steel, of a ruin and of a bustling hospital, of forgotten wars and of current wars, of a platform for fighting and a place to cure wounded fighters, are obvious.

The simple reality of the contrasting cliffs above Landstuhl is also obvious. Every day, on one of those cliffs, dedicated people are doing what they can to heal people. On the other, there are only mementos of ancient wars.

To U.S. Air Base Balad, Iraq

Today we have a full plane heading "down range" to Balad. The flight leaves Ramstein at 3 p.m. (1500) local time, and the plane with its patients will return to Ramstein early tomorrow morning.

The passengers include a large number of troops returning to Iraq and two air evac teams. One, the 43d Aeromedical Evacuation Squadron out of Pope Air Base, North Carolina, will return with us to Ramstein after a quick stop to pick up the wounded. An air evac team can consist of five or more members, though five is most common. A crew of more than five is used when the medical needs of patients are highly acute. Included in the team is a medical crew director (who is the senior officer and a flight nurse), other flight nurses and medical technicians. Physicians travel with an evac team only when a patient's needs require it. Also aboard our flight are military on leave returning to Iraq, and three doctors.

Two doctors are returning after accompanying wounded on flight last night from Iraq. The third doctor is a young woman flight surgeon who needs to log air time to maintain her flight qualification. She will return tonight with the wounded being taken to Landstuhl. Although board certified in pediatrics, she handles a broad caseload at Landstuhl. The other two doctors on our flight will stay in Balad. One of those doctors sits near me and reads throughout most of the trip. His reading of choice is "Bratton's Family Medicine – Board Review". The doctor has great trip discipline.

Since personal electronics can be used once the C-17 reaches cruising altitude, and stay in use until the descent starts, there are many lap tops and iPods on our flight. Despite the opportunity to use electronics, some soldiers are reading, two are doing crossword puzzles, and many are sleeping. James Patterson novels seem to be popular. Other reading is an eclectic mix, including "The Ayatollah Begs To Differ -

The Paradox of Modern Iran,” “Pediatric Preparation for Pre-Hospital Professionals,” “Introduction to Criminal Justice,” and the now popular teenage vampire novels. Later into the flight the doctor studying for board certification puts on a Harvard baseball cap that has faded from crimson to a wan shade of pink. Having a daughter who graduated from Harvard encourages me to intrude. He tells me he is regular Air Force and already triple board certified. He went to Harvard as an undergraduate, and has had the cap for years. He very pleasantly answered all my questions. He seemed most pleased when he told me that in a few weeks rotates back to the U.S. to his wife and children.

The five-hour flight to Balad from Ramstein ends with a steep descent accompanied by evasive moves. C-17’s flying into Balad arrive only at night and at a steep angle, nearly three times steeper than the landing approach for a civilian flight in the States. This “combat” descent minimizes the exposure of the plane’s broad underside to possible ground fire.

The descent begins soon after all lights in the plane are turned off, leaving only dim green wall lights. The wall lights turn soldiers in camouflage gear into dusky green shapes that blend into the plane’s fuselage.

While our descent into Balad is more hurried and steep than a commercial descent, it is never rough. The landing is smooth. Unlike a civilian landing we fly with a crew chief, and the crew chief and load master stand, only vaguely visible in the darkened plane, at small windows that open out from the belly of the plane. They are looking for flashes that indicate a shoulder-launched missile or some other fire is headed our way. Most of the passengers have put on flak jackets and steel pots prior to descent. The shoulder-holstered pistols on the crew chief and load master are not standard commercial airline issue.

Balad Air Base, Iraq

We land at about 2 a.m. local time. The lights in the plane are quickly back on and the ramp at the back of the plane’s belly lowers in a noisy, rhythmic three step process – down, up and in, and then down again, until the bottom of the ramp touches the tarmac. Since our time on the ground will be short, I stay with the plane along with the crew and the medical evac team that will be returning to Ramstein. The other passengers grab their gear and walk off the ramp into the small pool of light emptying from the plane’s cargo bay. Several soldiers carry fabric grocery bags. I help a woman soldier carry three bags off the plane and ask what she carries. “Mostly milk” is the answer. Apparently, the milk at Balad is not the equal of what she is bringing back from Germany. She seems quite pleased to be lugging those three grocery bags plus all her gear.

The night is clear and cold. Far across the tarmac are the base buildings. We seem quite alone in the middle of this apparently empty airfield as the tech crews service the plane. Then, with no warning, two F-16’s scream past, invisible as they fly without lights.

By 2:15 or so, a convoy of four buses moves toward our plane from across the airfield. The buses move slowly in single file, keeping an equal separation all the way to the plane. Once the buses back up to the plane’s ramp, a dozen or so enlisted personnel step off the buses, and with the evac team’s help they bring the wounded off the buses, one litter at a time. Each litter movement is carefully choreographed. First, the litter is moved to the back of the bus, where six litter bearers wait to take it on at shoulder height. Once the litter is held steady at shoulder height, on a hand signal the six litter bearers lower the litter slightly. Then, following a thumbs up signal from the medical crew director standing on the plane’s ramp, the litter bearers move quickly into the plane. Only one litter moves at a time, so all attention is on a single group of people moving a single patient. One of the patients who is brought aboard tonight is seriously enough

wounded that a CCATT team (Critical Care Air Transport Team) comes on board with him. The CCATT team includes an intensive care physician, a critical care nurse and a respiratory specialist.

The medical crew director for this flight's evac team is a Major from Tacoma. She has made over 100 flights in and out of Afghanistan and Iraq and she talks of the early days of the Iraq war when the number of wounded was much larger than it is now. The Major clearly has the leadership gene, and she loves what she does. On this flight her job is to break in a young team and watch over the non-critical evacuees. She mentions with pride the military's policy that when an injury occurs anywhere in Iraq or Afghanistan that involves "life, limb or eyesight", an air evac team is sent immediately to lift that person out of the field and get them to a base hospital, such as Balad. Then, if necessary, out of theater to Ramstein, and eventually back to the U.S.

The evac teams talk of the "golden hour," the first hour after a serious wound or injury occurs. It is the military's goal to get soldiers out of the field and to a field hospital within that hour. The Major is totally committed to whatever it takes to beat that hour. She sees the hour as a "promise" made to each man or woman with "boots on the ground." Her next tour will get her closer to the fight since she plans to be part of the initial battlefield pick-up flights, not the flights to Ramstein. She is a reservist, and looks forward to going home, but she also takes great satisfaction in what she is doing. She has completed multiple tours, and she will do more tours. She tells me that her family, her faith and the mission keep her at the job despite its costs in time and money.

Once the evac team has the litter patients off the buses and safely on the plane, the ambulatory evacuees leave their bus and walk aboard on their own, or with a helping hand. The tradition is for the dozen or so litter bearers and the medical evac teams to form parallel lines that stretch along the tarmac from the bus door to the plane. As these ambulatory soldier-evacuees walk to the plane's back ramp, some relying on the help of others, the two lines clap the evacuees aboard.

With the plane now loaded, there is no waiting. The ramp reverses its complex dance and settles back into the plane. The litter patients are strapped in, and we are on our way. The combat-style descent into Balad did not seem abrupt to me, but the take-off is steep, fast and exhilarating. We'll be back at Ramstein in five hours. For those five hours the evac team members will stay on their feet with their patients, constantly monitoring patients, changing dressings, and helping support those who can walk make their way to the toilets. Often, they simply stand close and speak into the ear of a man on a litter. The man may be out of the war, but he is not out of danger.

Landstuhl Military Hospital

We taxi to a stop at Ramstein and within minutes the ramp at the back of the plane touches the tarmac, and a medical team from the Landstuhl hospital joins with our air evac team to transfer the wounded to buses, including buses fitted to hold litters, for the few kilometer ride to the hospital.

At the hospital, operating rooms are pre-figured for those who need them. The buses will be met by a group that includes trauma doctors, emergency nurses, technicians, chaplains and military liaison officers. The liaison personnel will see that the wounded, as soon as they are able, can contact family and stay in touch with their units.

The leadership and staff at Landstuhl know they must offer more than excellent care of damaged bodies. They recognize the need to begin the emotional healing for the wounded as soon as possible.

The care at Landstuhl has evolved over nearly ten years of war, and in that time the care has come to focus more and more on the emotional and mental state of the men and women who are air-evac'd in. This includes not only making chaplains available (and they have been here from the start), but also providing persons trained to deal with psychological issues. This is an area of increasing concern, as is the incidence of traumatic brain injury. From the people with whom I spoke at Landstuhl, it seems that Landstuhl is building resources in both areas, and very much needs to build those resources.

Ramstein, to Andrews Air Force Base

It is early Sunday morning, yet the two lounge areas in the terminal at the Ramstein Air Base are full of soldiers in uniform, and all are headed to Iraq and Afghanistan. In the downstairs lounge area a group of fifty or so wait for their flight. Some play cards on the floor, others toy with laptops, read or nap. Upstairs, in the USO lounge, the scene is the same. The two groups are mostly senior NCO's. As they walk around, talk and joke they all show the same casual confidence that comes with the experience their rank suggests. Each of them looks robust and fit, yet as a group they are noticeably soft-spoken. There is an easy camaraderie of experienced men who need not be hard men on this day.

These waiting areas at the Ramstein air terminal are clean and attractive, with exposed duct work that still looks new, spotless floors and walls of light wood. The terminal is almost entirely non-commercial, the only exception being a Subway sandwich shop that opens onto a dining area with large windows on two sides. Besides the Subway sandwich shop, servicemen can use the USO facilities, including a pleasant canteen, with internet service and a continuous supply of cookies, snacks and coffee. The noncommercial nature of the terminal emphasizes the distance these men and women will be going from the familiar of day-to-day life. Not a distance measured in miles, though the miles will be many, but a distance measured from the ordinary to the extraordinary.

It is a lovely morning, clear skies and close to 50 degrees. Neither the skies nor the temperature is typical of Germany in late January. When the flight back to Andrews is ready, the evac team boards its patients from buses that have been driven onto the tarmac from the hospital at Landstuhl. The weather makes for easy boarding of the litters. The medical team that brings the patients to the plane (essentially a transition team from the Landstuhl hospital) hands their patients over to the air evac team. The transition team commonly includes a doctor as a team member, and this morning the doctor is the attractive young woman who flew with us to and from Balad. A chaplain is also with us, a tall man from the States who wears a knit ski cap marked by a cross sewn into the front of the cap. He moves from one evacuee to another, offering a word or two and a touch on shoulder or forehead. The chaplain, a reservist, has a congregation in the States. He tells me that his time at Landstuhl has been one of the best things he has done in his ministry.

Today's air medical evac team is the 446th Air Evacuation Squadron, Air Force Reserve, based out of McChord Air Force Base in Washington State. The team members are from a number of states, California, Utah, Colorado, Oregon and Washington among them. The lieutenant colonel who leads the team has over 20 years of air evac experience and one of his team members has over 29 years of air evac experience.

Once we are airborne, the air evac team constantly moves among the patients, but there are opportunities to speak briefly with team members. They convey nothing but professionalism and enthusiasm, as have all the evac crews with whom I travelled. The lieutenant colonel in charge has made many such flights. At one point he offers that experienced air evac personnel can never accurately guess the number of patients

they have cared for, but no air evac team member would ever forget a patient that they lost in flight. He counts himself “blessed” in never having lost a patient that way.

The air evac teams that work the Iraq and Afghan wars lose very few of their patients. While the following numbers are not exact, they are close. If a wounded patient makes it onto an evac flight from Balad to Landstuhl, the chance that he or she will make it to Landstuhl alive is thought to be over 98 percent. And, if a patient makes it to Landstuhl, the chance that the patient will live is even higher. While many of the patients who make the air evac trip to Germany are not at serious risk of death, these numbers are outstanding given the tremendous physical trauma caused by IED’s and modern weaponry.

Most air evac teams are made up of reservists and members of the national guard, and these service members pay a real economic price for their service. When on duty, these nurses and technicians make no more than a quarter of what they would make if they were instead working at a hospital in the States. The pilots of the C-17’s that carry the evac teams and patients also pay a serious economic cost for their service. The C-17 we have flown in since leaving Scott AFB, including down and back to Balad, and now back to the States, is flown by a crew from the 183rd Airlift Squadron out of Jackson, Mississippi. The squadron flies under the name “The Wings of the Deep South.” The flight crew is uniformly, and indefatigably, pleasant and helpful.

It is a long flight back to the States against strong headwinds, and the evac team stays attentive to their patients throughout.

We land at Andrews AFB late on a gray afternoon, in a gentle and chilly rain. The evac team makes a handover of their patients to a transition team from Walter Reed. The litters leave the C-17 one at a time, with the same care and attention as they were brought aboard.

My escort, Captain Stock, will be returning to Scott AFB. The evac team will break down their gear, and when all is stowed each of them will head for a hotel. Tomorrow they all catch civilian flights home. Some will fly a mission again in a month or two, others will not be on a mission for somewhat longer. One team member leaves soon for an assignment in Iraq.

But for now, these air evac team members will return to day jobs as nurses and technicians at hospitals and clinics in different states. They bring back to their employers and their civilian patients a standard of care, and caring, of the highest quality. They are proud of what they do, and of the way they do it. They should be.

Terry Jones