Soon after humanity was freed from the shackles of their earthly confines via the balloons of the Montgolfier Brothers in 1784, there were already busy minds trying to figure out how to put these new inventions to work.

Actually, “man” was not the first to go up in the balloon of French paper-mill operators Joseph-Michel and Jacques Montgolfier. They first had a test run, using a sheep, a duck and a rooster as passengers for the first airborne attempt. The sheep stayed calm throughout the flight, while the duck was found cowering in a corner and the rooster’s wing was broken when the sheep decided to kick it.

Despite that rocky start, French physicians began to consider the benefits their patients could gain from flight. According to the Web site “Aeromedical Transport: Facts and Fiction” (http://www.uam.es/departamentos/medicina/anesthesia/journals/ijeicm/vol1n1/articles/aeromed.htm), Paris doctor Jean-Francois Picot theorized that not only could patients tolerate balloon flight, but that they would in fact benefit from purer air encountered at altitude. Those theories were never translated into practice, however.

Legend had it that the start of aeromedical evacuation and transport occurred roughly a century later during the capture of Paris in the Franco-Prussian War from 1870-71. Even though people and cargo were transported by balloons during that time, it was never proven any seriously ill or injured patients were actually transported.

Jump forward about 33 years, after Wilbur and Orville Wright proved that manned, engine-powered flight in heavier-than-air craft was possible in their maiden flight at Kitty Hawk, N.C., in 1903.

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Later in 1909, two bright young Army officers quickly noted the potential of such aircraft in moving injured Soldiers off the battlefield.

At Pensacola, Fla., Capt. George H. R. Gosman, Army Medical Corps, and 1st Lt. Albert L. Rhoades, Coast Artillery Corps, used their own money to construct a craft in which the pilot, who would also be a doctor, sat beside the patient.

They built and flew the aircraft at Fort Barrancas, Fla., in 1910. Unfortunately, on its first test flight, it flew only 500 yards at an altitude of 100 feet before crashing into a tree and was never used to transport actual patients.

Lacking the personal funds to continue the project, Gosman went to Washington to seek money from the War Department.

He told them: “I clearly see that thousands of hours and ultimately thousands of patients would be saved through use of airplanes in air evacuation.”

The Army still deemed the idea impractical.

During WWI, the Army finally came around to the idea of transporting wounded Soldiers by air. This change of heart was based on the success in February 1918 of Maj. Nelson E. Driver, a
AEROVAC from AB12

The new 1921 Curtiss Eagle allowed four patients on litters and a medical attendant enclosed within the fuselage. Unfortunately, in its first year of service, an Eagle crashed during an electrical storm, killing seven people. Despite the setback, aeromedical transportation continued to progress.

In 1922, the U.S. Army converted the largest single-engine airplane built at the time, the Fokker F-IV, into an air ambulance designated the A-2.

Also that year, according to Olive-drab.com, U.S. Army physician Col. Albert E. Truby first listed the potential uses of the airplane ambulances: transportation of medical officers to the site of crashes and evacuation of casualties from the crash back to hospitals; transportation of patients from isolated stations to larger hospitals, where they could receive better treatment; in time of war, transportation of the seriously wounded from the front to hospitals in the rear; and transportation of medical supplies in emergencies.

In the next few years the Army occasionally used air ambulances to provide relief to disasters in the civilian community.

In April 1927, after a tornado struck the small town of Rocksprings, Texas, the Army sent 18 DH-4 observation planes, two Douglass transports, and a Cox-Klemmin XA-1 air ambulance.

These planes flew in physicians and supplies to treat 200 injured citizens, some of whom the Cox-Klemmin then flew out to more sophisticated medical care in San Antonio.

When WWII began on Sept. 1, 1939, it was still a common belief was that air evacuation of the sick and wounded was dangerous, medically unsound, and militarily impossible, according to the Web site http://www.air-ambulance.net.

Some in the Army Medical Department still didn’t believe that the airplane was a substitute for field ambulances, even when it was necessary to evacuate casualties over long distances.

The surgeon for the Army Air Forces Combat Command, Maj. I. B. March, voiced his concern that field ambulances would not be sufficient to cover the aerial paths of the air forces.

The surgeon general of Third Air Force, Lt. Col. Malcolm C. Grow, responded that the “chief stumbling block in the way of [air] ambulances has been the lack of interest on the part of the [Army] Surgeon General. Until he accepts the airplane as a vehicle for casualty transportation, I doubt if very much can be done about it.”

The reality of WWII soon demonstrated the necessity of air evacuation, however. The Burma Hump airlift operation from 1942-1943 was probably the first use of helicopters for combat rescue, often the first step in the air-evacuation process.

“The Hump” was a high-altitude military aerial supply route between the Assam Valley in northeastern India, across northern Burma, to Yunnan province in southwestern China, flown during World War II, according to the Web site for the China-Burma-India Hump Pilots Association, Inc. (http://cbihpa.org/history.html).

There was a need to transport large numbers of casualties back from distant battlefields, but designated air-evacuation aircraft did not exist, since Army Air Force policy stated that using transport planes for air-evacuation flights was a secondary mission.

Transport aircraft were being reconfigured for air evacuation, using removable litter supports, so that aircraft that transported men and supplies to the theaters of operation were utilized as air-evacuation aircraft on their return trip.

By January 1942, AAF C-47 Skytrain aircraft had transported more than 10,000 casualties from Burma, New Guinea, and Guadalcanal.

Today, the aeromedical evacuation mission continues. In support of Operation Enduring and Operation Iraqi Freedom, aeromedical evacuation crews made up of medical technicians, flight nurses, doctors, aircrews and aircraft mechanics.

Aeromedical evacuation is now an integral part of the practice of critical care medicine.

Though the abilities of the crews to deliver precise, quality medical care, the survival rate for service members wounded on the battlefields of Iraq and Afghanistan is up to 97 percent.