Sure there were a few medevac flights in helicopters as early as World War II, but extensive operational activity with helicopters devoted to patients really started during the Korean War, 1950-1954. Mobile Army Surgical Hospital Units (MASH) were formed to support four army divisions throughout North and South Korea and were credited with saving thousands of lives. Helicopters were introduced to transport wounded soldiers from the battlefield to MASH units located near the front line. The Sikorsky S-51 served early in the war, but the Bell H-13 (47D) was the primary helicopter used for patient transport. Patients were carried on litters mounted on skids on each side of the H-13. The "air ambulance" helicopters, as they were called, reportedly transported 100 casualties each day. Major Booker King, M.D., who served in a Korean MASH unit and co-authored an applicable article for the Journal of the National Medical Association, in May 2005, stated, "air evacuation undoubtedly contributed to a dramatic reduction in the death rate of wounded soldiers."

Who hasn’t seen the very popular program, MASH, on TV? The series, with a humorous flair, was based on the innovative experience of MASH units in Korea and generated broad awareness of the helicopter’s role in helping to save lives. Though the outstanding success of medical helicopter operations in Korea in the 50s was well documented, it did not immediately create a significant influence for medevac helicopters in the civil world, though it did plant a seed in a few fertile minds. However, an even greater impact on air medical success was created with the renowned utilization of the Huey (UH-1) helicopter in the Vietnam War during the 60s. As a result of impressive military experience there, we began to see the...
development of civil air medical helicopters as early as 1969.
If you had to pick one person who played the major role in the acceptance and growth of air medical helicopters in civilian life, it would most certainly be Dr. R. Adams Cowley, founder of the R. Adams Cowley Shock Trauma Center and the Maryland EMS System of Baltimore, Maryland. By 1960, he began a study of medical shock funded by an army contract. The result of his study was the first clinical shock trauma unit in the United States and the discovery of the “Golden Hour” phenomenon. In 1968, he requested use of a military UH-1, which resulted in the first medevac transport to his shock trauma center in 1969. Later, he received the full support of Governor Marvin Mandel, who in 1973 issued an executive order establishing the Maryland Institute for Emergency Medicine, creating the first statewide EMS system. Jon Franklin and Alan Doelp also chronicled Cowley’s story in a book in 1979 and later a television program based on the book. In addition to extensive recognition in medical circles, he is indirectly honored annually with the presentation of the Eurocopter Golden Hour Award at the Helicopter Association International’s (HAI) “Salute to Excellence” Awards banquet. The award was originally sponsored by MBB Helicopter Corporation. Dr. Cowley personally presented the first hourglass symbol of the Golden Hour Award to Randy Mains, then Chief Pilot of the University of California’s San Diego Medical Center, at a special HAI meeting on April 19, 1983.
As a result of Cowley’s efforts and the support of Governor Mandel, the Maryland State Police Aviation command completed its first medevac flight in a Bell Jet Ranger (206A) to the University of Maryland Hospital, in March of 1970. Through 2005, more than 110,000 patients have benefited from the Maryland Air Medical Program. There is no charge for air medical transport for citizens of Maryland. A nominal tag fee each time an automobile is registered covers costs. Today, the current fleet operated by the State Police includes 12 Eurocopter 365 Dauphin helicopters and two fixed-wing airplanes, providing coverage for the entire state of Maryland.
Another very early application of civil air medical service was initiated by the Loma Linda University Medical Center in Southern California with the official opening of a rooftop heliport donated by the hospital’s volunteer service league. The heliport was completed and dedicated on October 26, 1969. The first medevac patient arrived at Loma Linda in a Western Helicopter’s aircraft on December 14, 1969. According to Richard A. Schaeffer, the hospital’s historian, the idea of air medical service was conceived during a presentation on the high cost of medical care by hospital personnel to the Rialto Rotary Club. Schaeffer reported that Alec Fergusson, founder of Western Helicopter, responded to a comment from the hospital’s administrator that they had one piece of medical equipment that would save one life a year at the cost of $100,000. Fergusson countered with the question, “How many lives would a helicopter save?” The ensuing result was a 10-day trial using an Alouette 3 during the 1970 year-end holidays. The trial was a resounding success transporting 10 accident victims, and the air medical program was under way.
Interestingly, in contrast to Dr.
Cowley’s early procedure of simply transporting a patient without stabilizing the patient onsite, or in the aircraft, which created the colloquial “swoop and scoop” concept, Loma Linda elected, after the trial period to contract with Western Helicopters for a larger Sikorsky H-19 equipped with advanced life support systems and a medical attendant. Later, Loma Linda added a second H-19 (S55B) and much later, a Beechcraft Queen Air airplane. Schaeffer states that “Loma Linda Medical Center's air medical service was the first hospital-owned helicopter ambulance service in the nation.” Today, some 35 years later, more than 1600 helicopter landings a year are received at the two heliports at the medical center.

1969 was also the year for initiation of an air medical service in Phoenix, Arizona. In 1969, with the encouragement of D. Belton Meyer, a specialist in neonatal care, Dan Dearen, then Vice President of Business Development for Samaritan Hospital, made the decision to initiate an air medical service in Phoenix, Arizona. Justification for the decision was based on the specific objective of reducing morbidity and mortality throughout the region. To accomplish this, they elected to operate a Cessna 402 fully equipped with a medical interior. Months later they added a Cessna Skymaster to accommodate growing demand, and finally operated a fleet of Cessna Conquests. Over a period of some 30 years, about a dozen fixed-wing aircraft were utilized.

In 1979, a decision was made by Samaritan Air Evac to add an Alouette 3 helicopter, operated by Rocky Mountain Helicopters. In 1981, a Eurocopter 350 was added. Then, in 1986, under the direction of Larry Cooper, a retired Air Force Colonel, the helicopter fleet was switched to Eurocopter BO 105s and BK 117s operated by Omniflight, Inc. Cooper retired in 1993 and Dave Samuels took over as Director of Operations. During the tenure of Samuels and Cooper, the air medical operation grew to six BK 117s and five BO 105 helicopters, plus five Cessna Conquest 441s and one Lear Jet 35A. In 1998, total helicopter flights totaled 5,600, the Cessna Conquests made 2,400 flights and the Lear Jet about 150, adding up to over 8,000 medevac flights. Samaritan Air Evac Operations experienced substantial growth over the period of about 30 years due to efficient management and growing demand.

However, in 1998 Samaritan began to consider reduction of business activities not in line with their core business. They dropped a number of regional medical facilities, and since the Air Evac program brought only about 35 percent of patients transported back to Samaritan, they elected to offer Air Evac for sale. As Dave Samuels relates, they selected PHI (formally Petroleum Helicopters, Inc.) of Louisiana, as the exclusive prospect based on their outstanding reputation. After almost a year of due diligence, PHI agreed to acquire Air Evac in 1999. Dave Samuels agreed to stay on for about a year of transition and finally Howard Ragsdale from PHI was named Director of Operations. In 2005, Andy Faletto, with 16 years of experience managing the Hermann Hospital Fleet in Houston, became Director of Operations. Andy also served as Chair of HAI’s Air Medical Services Committee for two terms. Today PHI’s Air Evac is a stand-alone operation with 11 Eurocopter 350s, three Cessna Conquests and one Lear 31. Total number of flights average about 700 per month. The change from a hospital-supported program to an independent provider system points to the growth of independent provider services occurring today across the country.

In August of 1970, undoubtedly as a result of successful experience with military medevac helicopters, the U.S. government launched a civil medevac program called Military Assistance to Safety and Traffic (MAST), which provided medical transport in five western states. The program lasted only 19 months due to opposition from operators and the HAA (now HAI), but did fly 891 missions. Nonetheless, during that limited period, there was incentive on the part of a few hospitals to make heliports available. As a result, St. Anthony Hospital, of Denver, Colorado constructed a rooftop heliport at the hospital, which was essentially idle after demise of the MAST program.

In 1971, during the period of heliport idleness at St. Anthony, a former Marine pilot, Len Kasdorf, formed a new company in Denver, Colorado, called Olympic Wing and Rotor using an Alouette 3 and two fixed-wing aircraft. His plan was to be available for the potential future winter Olympics which ultimately were not held in Denver. However, as related by Dan Reich, a former Army helicopter pilot, he and Gene Franks, a former Marine pilot, were the first two pilots hired. Dan tells the story that they often used the St. Anthony rooftop heliport for pinnacle landing practice. Then a combination of events, including the practice land-
ings, the pending Olympics, and a dreadful airplane crash in nearby mountains, with no survivors, apparently led the Chief Executive Officer of St. Anthony, E.V. Kuhlman, to contact Len Kasdorf for a discussion of an Air Medical Program. The concept was supported by Dr. Boyd Bigelow, Medical Director, and Dr. Henry Cleveland, resulting in the implementation of the operation utilizing an Alouette 3. Today, this stands as the first hospital-based helicopter program in the U.S.

Reich and Franks became the first two medevac pilots housed at the hospital, with the helicopter stationed at the rooftop heliport, ready to provide quick response. The helicopter was equipped with two stretchers and a portable medical kit developed by Fred Turner, the hospital's EMT. One trained flight nurse would normally crew each flight. After extensive start-up training, the program was initiated in October 1972. For the first six months, flights only averaged two a day, but then demand began to grow. After about eight months, a second Alouette 3 was added. The very successful operation continued to grow and became a model for many new hospital air medical programs, which contributed significantly to the election of Dan Reich to the presidency of ASHBEAMS, the International Association for Air Medical Services. Reich served for two years, 1985 and 1986, which were still early years in the development of the association.

Today, St. Anthony's “Flight for Life” program, operating out of Denver, Frisco, Pueblo, and Colorado Springs, Colorado, is staffed with
highly trained nurses, paramedics, and respiratory therapists. Four Eurocopter 350 B3 helicopters, operated by Air Methods, two fixed wing airplanes, operated by Mayo Aviation, and ground ambulances, operated by the hospital, accounted for 4,113 transports in 2005. The total area served includes Colorado, Kansas, Nebraska, Montana, New Mexico, South Dakota, and Wyoming.

The late 1960s and early 1970s witnessed the beginning of dedicated Air Medical Service in the U.S. The years from 1970 to 1980, while still embryonic, generated some 30 to 40 new programs and created increasing interest from the medical community across the country. Not surprisingly, one particularly significant result of the growing activity was the need to develop a forum for sharing information and providing leadership in a very young civil air medical industry.

In need of information, program directors of four Midwest hospitals had been talking to each other about their medevac experiences and, with the encouragement of Rocky Mountain Helicopters, who operated three of the programs, decided to meet, for what was the first session leading to the development of an association. According to Karl Gills, then of the Iowa Methodist Hospital in Des Moines, the meeting occurred in March of 1980 and included Joe Tye of the University of Iowa Hospital, Bill Latimer of St. Luke Hospital in Kansas City, Missouri, and Nick Piper of St. Joseph Hospital in Omaha, Nebraska. At this meeting, a consensus was reached to continue exploring the possibilities of an association.

Later, a follow-up meeting was held, and the program directors of three additional hospitals were invited. Included was Susan Herron from Air Evac of Tulsa, Oklahoma, Nina Merrill of the Memorial Medical Center in Long Beach, California, and Marguerite Badger from Hermann Hospital in Houston, Texas. Following this meeting, Marguerite Badger agreed to host what became the first official meeting of ASHBEAMS, with some 50 program directors and other interested parties in attendance. This took place in December of 1980, and became the official date for the founding of the association. Of the original participants, Joe Tye became the first president of the fledgling association, and was followed by Karl Gills as the second president. Nina Merrill became the Executive Director in 1985.

In 1988, members elected to change the name from ASHBEAMS to AAMS (Association of Air Medical Service), which was more representative of the broader participation in growing air medical services. Today, according to an estimate from AAMS published recently, there are 350,000 helicopter transports annually in the U.S., with an additional 100,000 patients flown by fixed-wing. According to Helicopter Association International, there were 712 turbine helicopters in U.S. air medical service at the end of 2005. Fixed-wing added about an additional 150 aircraft.

Perhaps even more gratifying than the growth of air medical aircraft in the U.S., is the impressive change in the procedure of patient care. In the early days of military and civil air evac, the primary objective, with only a few exceptions, was to move the patient to a hospital quickly — within the “Golden Hour.” Today, while speed of transport is still as important, air medical specialists provide advanced life support for the patient in-flight, or at the scene of an accident. The system is approaching the capability of a hospital emergency facility. Additionally, while support for air medical aircraft is still largely hospital-oriented, there is a fast-growing trend for independent providers such as PHI’s Air Evac, who do not rely on hospital contracts. There is also a growing trend for subscription systems such as Air Evac Lifeteam, in West Plains, Missouri and Acadian Ambulance in Lafayette, Louisiana. Thus the base for air medical flight operations is broadening, and with ever-improving medical care, the combination contributes significantly to reduced morbidity and mortality.

A note of appreciation is extended to the many old-timers who helped to retrieve pertinent information on the air medical industry going back as far as 36 years, and also some of the younger experts with experienced credentials. It would not have been possible to reconstruct the early day’s story without their help. They are all named in their applicable segment of the historical activity. Additionally, there were a few other early operations in air medical service, which we have been unable to identify. To them and to the services identified, we offer our applause and congratulations for a job well done.

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