EMERGENCY MEDICAL SERVICES LEARNING RESOURCES CENTER

The University of Iowa Hospitals and Clinics

EMS Update

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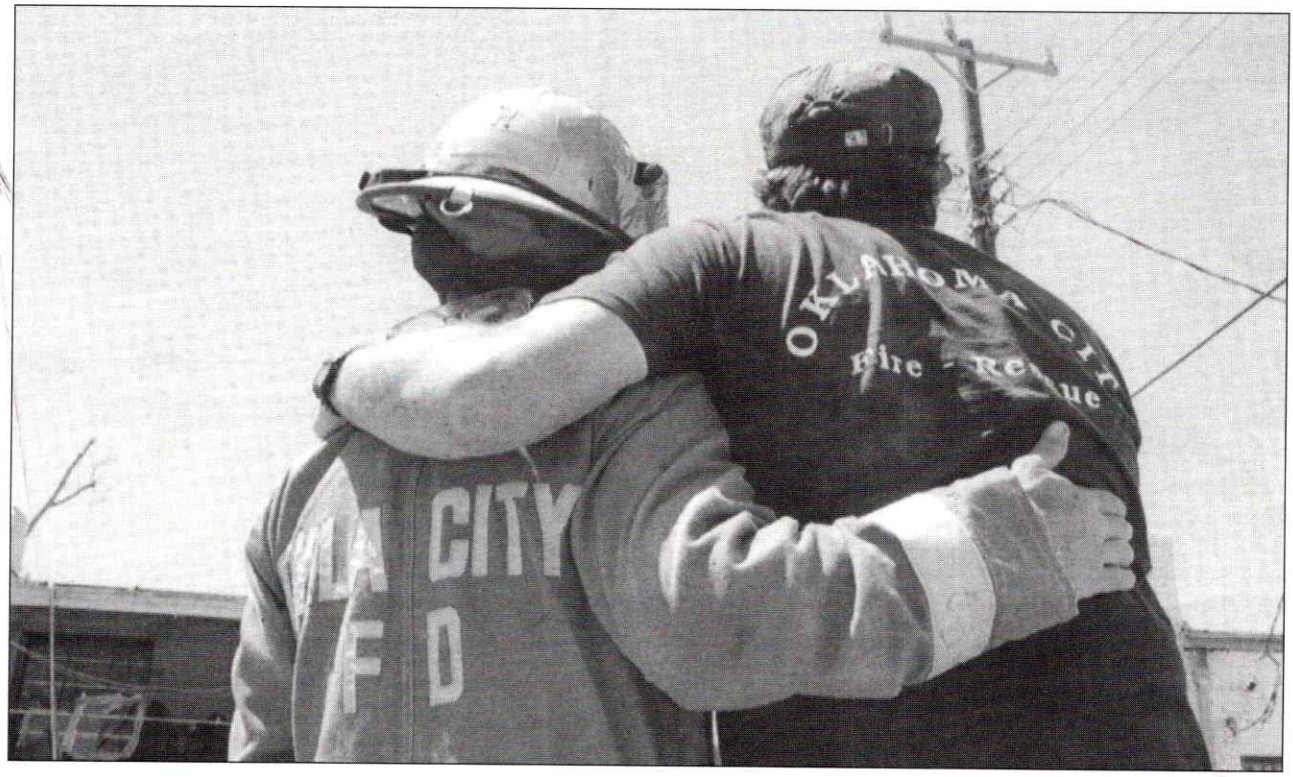

Twenty-one members of the Iowa Critical Incident Stress Network counseled rescuers in Oklahoma City after the federal building was bombed.

Iowa critical incident stress teams respond to Oklahoma City

Rescue crews searched around-the-clock for victims after the bombing of the Alfred P. Murrah Federal Building in Oklahoma City, April 19, 1995. Tom Boeckmann, Pam Fincel and 19 other Iowans responded to the emotional needs of those rescue crew members.

All are members of the Iowa Critical Incident Stress (CIS) Network. The team is multi-disciplined and includes law enforcement, dispatchers, mental health, fire fighters, nurses, paramedics and EMTs.

Boeckmann, EMT-P, Northeast Regional Coordinator with the Iowa Bureau of EMS, and State Critical Incident Stress Network Coordinator, telephoned a policeman friend in Oklahoma City to see how the rescue crews were coping since the explosion. After talking with him, Boeckmann knew they needed assistance and Critical Incident Stress teams from Dubuque, Waterloo and Sioux City prepared to leave. American Airlines flew them at no cost, round trip to Oklahoma City.

Boeckmann, Fincel, RN, EMT-P, Director of the Emergency Trauma Department at Finley Hospital, Dubuque, and the other team members went to Oklahoma City, Friday, April 21 and stayed for five days. They returned the following Monday and stayed for another five days.

The debriefing teams were not involved with the body recovery, but with rescuers, National Guard,

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Oklahoma City

Tom Boeckmann, (right) and Pam Fincel, (far right)

police, construction workers, and firefighters. "We debriefed the mental health workers who had been there for five days and the triage nurses who were actually at the scene recovery," says Boeckmann.

"We were there to do whatever they needed. There were police officers who had been in on the original rescue, then moved to the perimeter to direct traffic in horrible weather for 13 hours. Our job was to be the ears for them and others."

"We told them what they could expect emotionally and psychologically," adds Fincel. "They then advised their families of the warning signs so they could be aware of possible emotional or psychological problems."

The team members encouraged rescuers to verbalize their experiences and feelings. They stressed that the best treatment for this type of tragedy is to talk about it, let the emotions out and scream or cry.

The Iowa CIS team stayed at the Oklahoma County jail because they worked with search and rescue teams from there. They only received about two hours of sleep each day because the search and rescue crews would come back to the jail at night and seek them out to talk.

"When we returned the second week, it was like we were at a different place," says Boeckmann. "The people were exhausted. They were no longer running on adrenaline. They realized it was no longer a rescue, but now was only recovery. So much had changed in that five days we were gone."

Boeckmann feels that the best information they gave the rescuers is that their behavior is normal.

"The emergency care people said, 'This is my job. Why am I feeling this way?' They needed reassurance that it's normal," says Boeckmann. "Here's how you deal with it and make it a little better. We reminded them that the event was abnormal, but that their feelings are normal."

It's best for them to talk about it, and discuss what they saw. The rescuers could release their feelings to one of the team members, then go back in and do more. Some of them got so involved in the rescue they couldn't leave. The CIS team helped them leave. They helped them talk, take a break and be effective when they went back. It was like giving them permission, according to Boeckmann.

The team tried to help them recognize that it is part of their life experience and that it does not become their life. The recovery is an individual process. Some have started; some will take years to go through it.

"The people were absolutely wonderful. The jail staff, emergency workers and the general public met us with open arms.

"The last night of the first week we met with police," says Boeckmann. "One officer needed to talk. We closed the door, he cried, took off his shirt, handed it to me and said 'You folks from Iowa have given us the shirts off your back and I want to do the same.'"

"There were hundreds of people on site, but there was an eery quietness," says Fincel. "Everybody down there did so much to help. They pulled together, and everybody did a great job—even the bystanders. Everyone wanted to help so badly; all you had to do was ask for something, and it was right there."

"Two events I saw made an impact on me," adds Boeckmann. "The 20-year veteran police officer, who had been in Viet Nam, directing traffic. . . holding a teddy bear. And the firefighter walking away from the explosion site then collapsing to the ground in tears."

The Iowa CIS team had T-shirts made and sent to Oklahoma with the states of Iowa and Oklahoma and a purple ribbon between them including the words—"Tragedy Brought us Together. Friendship Will Keep us Together".

Dubuque had the only CIS team in Iowa when the plane crashed in Sioux City in 1989. State coordinators decided Iowa needed a CIS network. The training sessions are taught by Jeffrey Mitchell, PhD, clinical psychologist and founder of the International Critical Incident Stress Foundation, Ellicott, Maryland. The two-day training sessions, held throughout the country, teach good listening skills, how to let out emotions, and how to educate emergency crews dealing with stress.

Students enrolled in the EMS Learning Resources Center Paramedic Training Program are introduced to disaster responses. "We teach the paramedic students to prepare for mass casualties and the day-to-day pressures," says Doug York, REMT-P and Director of the EMSLRC.

"We present a disaster scenario and have them classify 16 patients as dead, critical, unstable or walking wounded. It teaches them to determine a patient's condition in a disaster."

Firefighters and medical professionals said no amount of experience dealing with death could have prepared them for the loss of so many innocent lives in Oklahoma City — and so many young children. They said seeing the children was the toughest part. To think that this would happen in America.

The other Iowa CIS team members traveling to Oklahoma City include: Becky Bedard, Cedar Falls; Pat Boeck, Janesville; Joyce Blum, Dubuque; Lois Camplo, Sioux City; Roger Carr, Waterloo; Bob Flannery, Dubuque; Judy Graber, Sergeant Bluff; Kevin Hadke, Sioux City; Kelly Hansen, Sioux City; Sue Harned, Cedar Falls; Patrick Hentges, Bernard; Sandi Hutchcroft, Dubuque; Ann Jantsch, Peosta; Dave Kaplan, Sioux City; Dennis Liekweg, Waverly; Ellen McCardle Woods, Colo; Marilyn Monlux, Sioux City; Vince Vanden Heuval, Dubuque; Sam Webb, Cedar Falls.

Heimlich technique saves child choking on marshmallow

Anthony Black

Last summer, Anthony Black choked on a marshmallow while attending a speech and hearing summer program in Iowa City. His child care workers performed the Heimlich maneuver (subdiaphragmatic abdominal thrusts) and saved his life.

Each year the Wendell Johnson Speech and Hearing Clinic, in conjunction with The University of Iowa Children's Reading Clinic, conducts a six-week Summer Residential Program in Iowa City for approximately 30 children. The program is designed for children who need intensive speech and language remediation, aural rehabilitation, and/or special reading instruction. Children with speech, language, reading and hearing problems between the ages of 7 and 14 years are eligible. Children with all types of communication problems attend, including those with voice problems, articulation and language disorders, stuttering, speech problems related to cleft palate and hearing loss.

The children are supervised by a staff of child care workers, who are responsible for all living and recreational activities.

Elaine Mayer, CPR Coordinator, and Lance Heern, CPR Instructor, with the EMSLRC, train the Summer Residential Program staff each year in CPR and the Heimlich maneuver. The team was glad they had received this training when they used their

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Elaine Mayer, CPR Coordinator, with the EMSLRC, trains the Summer Residential Program staff each year.

1995 annual conference fast approaching

Register now for the eighteenth annual Topics in Emergency Medicine Conference to be held Thursday and Friday, October 12 and 13, 1995. The conference will relocate this year to the Highlander Inn, Iowa City.

EMS is an ever-changing profession, with new tools, treatments, medications and procedures being introduced every year.

Continuing education is essential to ensuring good patient care. Because volunteer EMS units in small communities usually have low call volumes, responders receive little field experience with actual patients. They can maintain proficiency by participating in continued training.

"Training organizations such as the EMSLRC have a responsibility to the EMS community to provide quality continuing education," says Doug York, Director of the EMSLRC.

"EMS is certainly not the same field now as it was 10 years ago in terms of techniques and equipment. We must keep up with the fast-paced research and new information that is being almost constantly disseminated. As administrators, trainers and field personnel, we need to keep re-educating ourselves to reach that one common goal care-givers have; providing quality patient care."

The conference offers separate inhospital and prehospital sessions each afternoon to meet the needs of all emergency care providers.

If you would like a conference brochure, contact the EMS Learning Resources Center at (319) 356-2597.

Each year at the conference, vendors display products and give course participants the opportunity to see what's new in EMS.

Russian visits and learns EMS system

Doug York

Last March 13-15, Vladimir Berezutskiy, MD, General Surgeon and EMS Administrator, Stavropol, Russia, visited the Emergency Medical Services at the University of Iowa Hospitals and Clinics to learn more about EMS in Iowa. He spent much of a day with Doug York, REMT-P, Director of the EMSLRC, learning the EMS education process at the EMS Learning Resources Center.

"He was most interested in our courses and how we conduct them," says York. "He wanted to know how and who we select for our paramedic training program participants."

"It was very timely that he visited when the paramedic students were near the end of their classroom portion of the training program," says York. "That day he observed students demonstrating one-on-one advanced skills with a simulated cardiac arrest."

Doug York, Vladimir Berezutskiy (center), and an interpreter discuss the manikins used to teach emergency courses.

The visit was part of an ongoing medical exchange program with physicians, nurses and paramedics in Stavropol. Periodically the Russian medical personnel visit Iowa to gain expertise on a specific area.

Berezutskiy was interested in the structure of EMS education. York shared with him the evaluation system including the state practical exam, the hands-on testing stations, the levels of training and the renewals and continuing education courses.

Berezutskiy hoped to return to Russia and set up EMS education in his area. He had read about the EMS education, but was interested in observing first-hand how the EMSLRC tests and evaluates.

Berezutskiy also toured the AirCare helicopter and Johnson County Ambulance Service.

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Heimlich

Katie Sackett

Louise Benedetti

skills to save a child's life last summer.

Eleven-year-old Anthony Black was eating 'somemores' (graham cracker, marshmallow and chocolate sandwiches) at a cookout in Iowa City June 30, 1994, when he began choking on a marshmallow.

Anthony tapped Katie Sackett, Assistant Child Care Worker, on the shoulder in distress. She asked, "Are you choking?" Anthony acted very excited, but didn't answer. Sackett gave him seven to eight upright thrusts until he started bending forward and sinking to the ground. She continued the Heimlich maneuver on the ground until she tired, then Louise Benedetti, Head Child Care Worker took over. Anthony has oral motor problems, difficulty swallowing and a lower gag thrushold.

"We kept telling Anthony to cough. Cough hard!" says Sackett. The half-melted marshmallow was not hard and was not something to cough up. It completely blocked his airway.

Anthony stopped struggling, started to lose consciousness and turn blue. His eyes were rolling back.

"Suddenly I heard a quiet bubbling sound in his throat and told Louise to stop for a minute," says Sackett. After 35-40 thrusts Anthony finally began gasping for breath.

"The marshmallow must have melted or dislodged enough to let air pass," says Benedetti. "I think it's important to be certified in CPR and the Heimlich maneuver and be recertified each year. We had prepared a plan for emergencies and this emergency situation went smoothly. Looking back, there isn't anything I would do differently."

Early recognition of airway obstruction is the key to successful outcome. Foreign-body obstruction of the airway usually occurs during eating. The Heimlich maneuver is recommended for relieving foreign-body airway obstruction. By elevating the diaphragm, the Heimlich maneuver can force air from the lungs to create an artificial cough intended to expel a foreign body obstructing the airway. Each thrust should be administered with the intent of relieving the obstruction. It may be necessary to repeat the thrust multiple times during each sequence to clear the airway.

Movement of air will be absent if complete airway obstruction is present. Oxygen saturation in the blood will decrease rapidly because the obstructed airway prevents entry of air into the lungs, resulting in unconsciousness. Death will follow rapidly if prompt action is not taken.

"When we were trained in CPR and the Heimlich maneuver we hoped we'd never have to use it. I'm very glad this training is required, because it certainly is something we need to know," says Sackett. "There was no time to think. We had to automatically do what we could."

Safety first concern in prehospital burn care

People getting outside and using charcoal grills, burning leaves, enjoying camping and fireworks increases the likelihood of people being burned. Summer and fall are seasons associated with high incidences of major burns, and it is a good time to remind ourselves of the emergency care burn victims require. The skin functions as a suit of armor that protects you from germs. Without it you lose your life.

The first priority is always to stop the burning. With flame burns, this is best accomplished by smothering the flames or putting the flames out with water. The victim's clothing must then be removed since clothing holds heat. If pieces of smoldering cloth have adhered to the skin, they should be cut (not pulled) away. Chemical burns should be irrigated with copious amounts of water. Electrical injury victims need to be disconnected from the source of current as rapidly as possible.

Jackie Heinle, RN, Assistant Nurse Manager of the Burn Treatment Center at the University of Iowa Hospitals and Clinics, established a statewide burn awareness program. She regularly travels to community ambulance services throughout Iowa to provide state-of-the-art information about how to care for burn injured Iowans.

Heinle educates emergency medical technicians, emergency room physicians, nurses and other emergency health care workers because it can make a big difference to patients. She lectures to each EMSLRC paramedic class. "If a patient is taken care of very well initially, it can make the first 24 to 72 hours a lot easier for him or her," says Heinle.

"Emergency care for a burn patient, like any other trauma patient, begins with the primary survey to recognize and treat life-threatening injuries. In burn patients, however, the dramatic appearance of burns and the characteristic odor of burnt skin may easily distract the emergency crews from life-threatening problems. It is important that the EMS provider be confident in the assessment and direct efforts away from the burn wound and toward the patient as a whole."

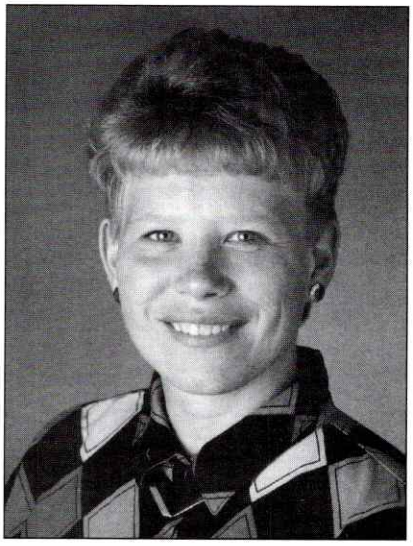
Goals for prehospital management of the severely burned patient include preventing further tissue injury, maintaining airways, administering oxygen and ventilatory support, providing fluid resuscitation, providing rapid transport to an appropriate medical facility, and minimizing the patient's exposure to infectious agents.

"The rule of nines is commonly used in the prehospital setting," says Heinle. "The measurement divides the total body surface area (TBSA) into segments that are multiples of 9 percent and is most accurate for adults and for children older than 10.

"The Lund and Browder chart is a more accurate method of determining the area of burn injury because it assigns specific numbers to each body part. It is used to measure burns in infants and young children because it allows for developmental changes in percentages of body surface area. For example, the adult head is 9 percent of TBSA, but the newborn head is 18 percent TBSA."

The majority of burns result from flames, scalds, or contact with hot substances. The degree of tissue destruction depends on the temperature and duration of exposure.

Burns must be assessed as accurately as possible in the field to ensure appropriate treatment and to monitor progression of tissue damage. Burns are classified in terms of depth as first, second, and third degree. First- and second-degree burns are partial thickness burns that usually heal without surgery. Third-degree burns are full-thickness burns that usually require skin grafts.

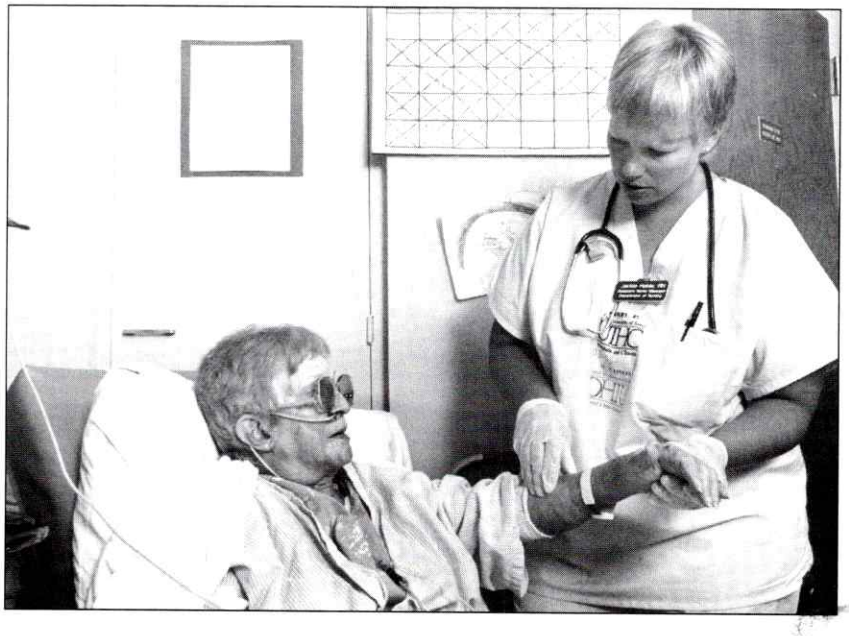


Jackie Heinle, (right)

An example of a first-degree burn is sunburn. Second-degree burns can often be characterized by blisters or a wound that appears red and wet or white and dry, depending on the degree of vascular injury.

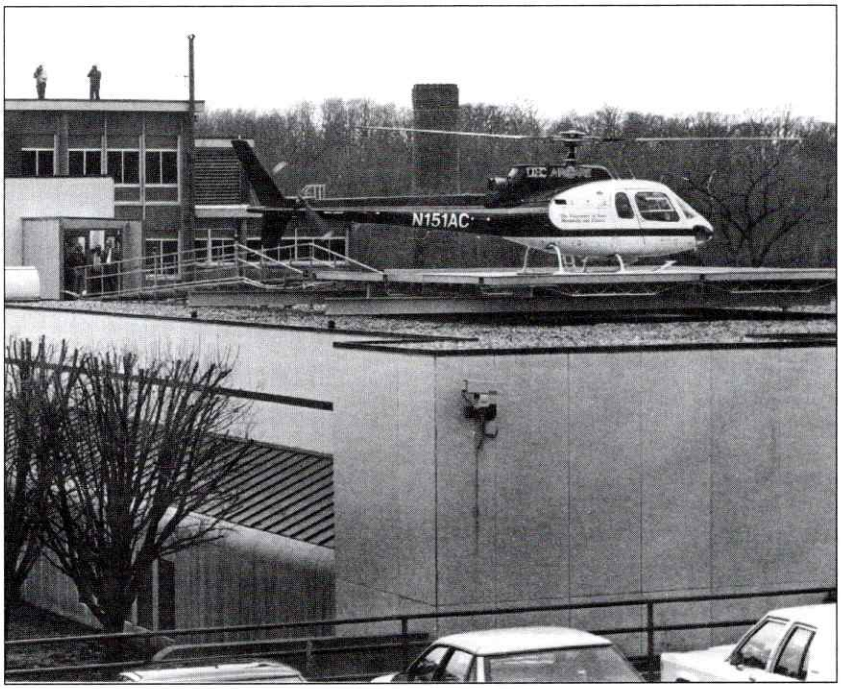
In third-degree burns, the entire thickness of the skin is destroyed. A definitive sign of a third-degree burn is the depths of which thrombosed veins are visible.

Heinle ends each lecture with the comment--"If this presentation keeps even one member of your family or community from being injured by fire, it has been well worth my time."



Jackie Heinle provides care to patients in the Burn Treatment Center and lectures across Iowa to emergency medical technicians, emergency physicians, nurses and other emergency health care workers on how to avoid and treat burn injuries.

Muscatine General Hospital completes new helistop



The new helistop at Muscatine General Hospital was formerly dedicated May 21.

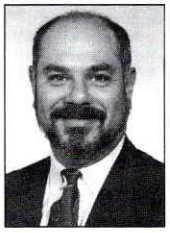
The University of Iowa Hospitals and Clinics' AirCare helicopter now lands on Muscatine General Hospital's rooftop instead of in a nearby parking lot.

The helistop, a 30 by 30-foot steel grid, which had been under construction since fall 1994, offers improved patient access to the hospital, patient privacy, and improved safety for both the public and patients.

The medical helicopters have been landing for more than a decade on the hospital parking lot. The parking lot helistop became a patient privacy concern. Patients had to be transported through the main hospital lobby across the parking lot to the waiting helicopter. Hospital personnel then wheeled the patient nearly 200 yards on a stretcher to the helicopter, often through rain, snow or wind. The new rooftop location allows more privacy for the patients.

Jonathan Goble

An elevator and newly constructed back door near the new helistop allows patients to be quickly rolled up a 65-foot ramp and into the helicopter. The patients and staff are not subjected to inclement weather as much now.



Jeffry Gauthier

"I do believe it's a major step in the safety of patients as well as their privacy. It has updated our ability to serve the more critically ill," says Jonathan Goble, Chief Executive Officer, Muscatine General Hospital, Muscatine, Iowa. "Whenever a helicopter was coming in to pick up a patient, the hospital would have to call local law enforcement officials and have them block off that area.

"This interrupted traffic through the hospital parking lots," Goble adds.

"Law enforcement officials also had to be present to guard the empty helicopter while medical personnel were in the hospital getting the patient. The helicopter can now be left unattended on the hospital roof."

In addition, cars were occasionally parked illegally on the helicopter landing site, despite warning signs and a large yellow circle with an 'H' in the middle painted on the concrete. To clear the space quickly, the vehicles had to be towed from the landing site.

The AirCare pilots previously had to be aware of power lines and above ground utilities near the parking lot. Now it is easier and safer for them to take off and glide in on the rooftop rather than landing down into the parking lot.

The $50,000 helistop was constructed without the use of any hospital funds. All costs were covered by money raised through a variety show to celebrate the 40th anniversary of the hospital and to raise funds for the new helistop.

"The community gave tremendous support," says Goble. "They saw the value of the emergency helicopter serving Muscatine and surrounding areas."

The helistop was designed with the future in mind. "The ramp and helipad can be unbolted, disassembled and relocated should the hospital increase its size and would have to grow upward," says Goble. The helistop sits on the top of a two-story wing built in 1970.

Muscatine General Hospital held a formal dedication of the helistop May 21 and offered tours of the hospital, the new decontamination trauma room and the AirCare helicopter. AirCare flight nurses were on hand to conduct the tours.

"The administration and board of the Muscatine General Hospital are to be commended," comments Jeffry Gauthier, UIHC Administrative Associate for Emergency Medical Services. "The new helistop is a first-class structure that reflects a much appreciated commitment to safety and efficiency.

"All of us at AirCare are grateful to all those who made the helistop construction project a reality," notes Gauthier.

EMS Update

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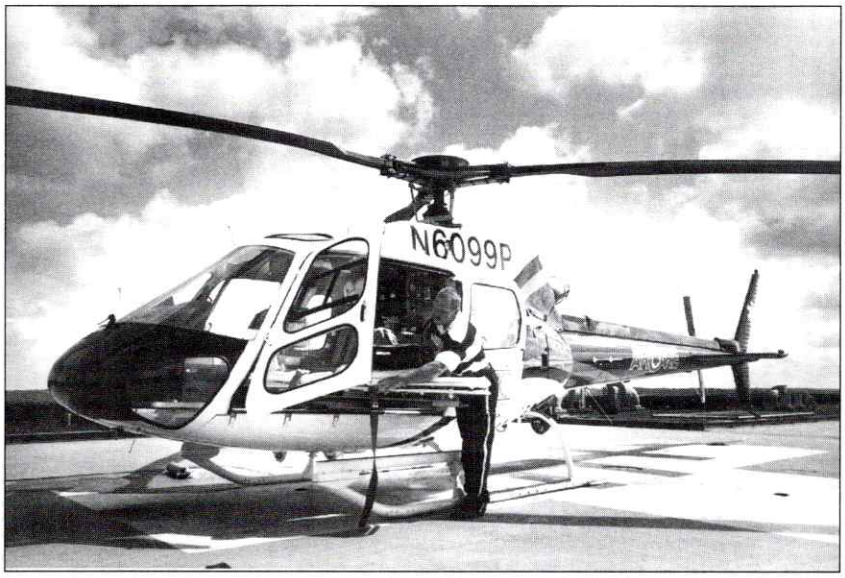
Patients and local communities benefit from new helicopter



The new AirCare helicopter's redesigned patient loading system makes it easier for ambulance crews to load the patient.

The new, more powerful University of Iowa Hospitals and Clinics (UIHC) AirCare helicopter flew its maiden voyage to Muscatine, Iowa, on Friday, June 30 and transported a patient with head trauma back to UIHC.

"The new helicopter has many advantages for the patients, pilots, flight crew and ambulance crews," says Jeffry Gauthier, Administrative Associate with Emergency Medical Services at UIHC. "Patients benefit from the increased useful load capacity allowing heavier patients and equipment to be transported. Also, the average flight range is increased to 220 miles roundtrip. In the past, the usable load capacity didn't allow enough fuel to transport that far without refueling. These distant flights had to be declined and reassigned to ground transportation."

The new helicopter has digital instrumentation giving more precise readouts and additional information to the pilots.

"The new patient loading system requires some orientation," says Gauthier. "We welcome the opportunity to present free inservices and orientations in local areas. In conjunction we're also glad to give our air medical safety training program."

To arrange an AirCare inservice and safety program, please call 1-800-272-6440.

Bedford Ambulance Service receives national award

In an ongoing effort led by ambulance director, Kay Lucas, REMT-P, Bedford Ambulance Service launched EMS education and prevention programs.

With no resident doctors or hospitals in Taylor County, Iowa, the Bedford Volunteer Ambulance Service provides much more than ambulance transportation. The Bedford Volunteer Ambulance Service received a $2,000 cash award for their participation in 'Make a Difference Day'. The *USA Weekend* magazine (which appears in the Des Moines Sunday Register) in partnership with the Points of Light Foundation sponsors the 'Make A Difference Day' each year.

Nearly 560,000 volunteers throughout the nation participated. More than 4,000 entries were received with 60 awards given.

The service organized a local health fair for that day at Bedford Manor nursing home. Volunteers gave free blood-pressure testing and trained teenagers and teachers how to respond to school emergencies.

Bedford Community School does not have a full-time nurse so a "Code Blue" team was initiated that afternoon consisting of high school students and teachers trained in first aid and certified in CPR. These dedicated students and teachers will respond from their classrooms to a "Code Blue" call at the same time the local ambulance is being notified of the emergency. This program impacts over 600 students and adults in the school system.

If an emergency occurs at a school, any member of the team would respond and provide assistance until the ambulance personnel arrive. Student members of the Code Blue team are: Leslie Lee, Nikki Edwards, Laura Zech, Tracy Schrodt, Sean Stanley, Kathy Nickell, and Aaron Hardee. Staff team members include Deb Gray, Kevin Blunt, Jeff Dougherty, Jim Reese, and Donna Watson.

Of those entries received, Bedford was the only Iowa community to receive an award. Kay Lucas, EMT-P, Director, Bedford Ambulance Service, read about the program in the *USA Weekend* magazine and decided to apply. As part of the process, letters of recommendation were submitted by Stephen Gruba, MD, General Practitioner at Mercy Hospital, Corning, Iowa and Medical Director of the Bedford Ambulance Service; Jim Dowling, Administrator of Bedford Manor; and local citizens.

The next 'Make A Difference Day' will be held October 28, 1995. Any volunteer group can participate but the function must be held on that day.

Editor's note: Bedford Ambulance Service also won the 1995 Iowa Community Health Prize sponsored by Methodist Health Network of Iowa and the Iowa Farm Bureau. The $5,000 award was presented to community groups working to improve the health and well-being of Iowans.

EMSLRC course calendar

		MD	RN	EMS
1995				
Sep 11-13	Bloomfield: Emergency Medical Dispatch	—	—	24
Sep 13	Albia: Multiple Trauma and System Management	—	0.7	7
Sep 16-17	Iowa City: PreHospital Trauma Life Support	—	1.6	16
Sep 19	Davenport: Advanced Cardiac Life Support Provider Renewal	4.0	.35	4
Sep 20	Sigourney: Drug Therapy in Emergency and Critical Care	—	0.3	3
Sep 20-21	Davenport: Pediatric Advanced Life Support Provider	11.5	1.4	11
Sep 21	Davenport: Pediatric Advanced Life Support Provider Renewal	4	0.4	4
Sep 22	Iowa City: Advanced Trauma Life Support Instructor	11	—	—
Sep 23-24	Waukon: PreHospital Trauma Life Support	—	1.6	16
Sep 26	Sumner: Multiple Trauma and System Management	—	0.7	7
Sep 28-29	Iowa City: Trauma Nursing Core Course	—	1.6	16
Oct 5-6	Iowa City: Emergency Nursing Pediatric Course	—	1.6	16
Oct 9,10 11, 16, 17	Iowa City: Advanced Cardiac Life Support Provider	—	1.7	16
Oct 12-13	**Iowa City: 18th Annual Topics in Emergency Medicine Conference**	**13**	**1.45**	**14**
Oct 18	Sigourney: Shock Recognition, Resuscitation, and Restoration	—	0.3	3
Oct 19-20	Davenport: Advanced Cardiac Life Support Instructor	15.75	1.7	17
Oct 20	Davenport: Advanced Cardiac Life Support Instructor Renewal	3	.35	4
Oct 25	Albia: Medical-Legal Aspects of Emergency Cardiac Care	—	0.3	3
Oct 26-27	Davenport: Pediatric Advanced Life Support Instructor	11.75	1.1	12
Oct 27	Davenport: Pediatric Advanced Life Support Instructor Renewal	3.5	.25	3
Nov 2-3	Iowa City: Advanced Trauma Life Support	17	—	—
Nov 6, 8,13	Iowa City: Pediatric Advanced Life Support Provider	—	1.4	11
Nov 7-9	Mason City: Emergency Medical Dispatch	—	—	24
Nov 15	Iowa City: EMT-A Course begins	—	—	—
Dec 5	Ft. Madison: Advanced Cardiac Life Support Instructor Renewal	3	.35	4
Dec 15	Iowa City: National Registry Written Exam	—	—	—
Dec 16	Iowa City: National Registry Practical Exam	—	—	—
1996				
Jan 11-12	Des Moines: Advanced Cardiac Life Support Instructor	15.75	1.7	17
Jan 12	Des Moines: Advanced Cardiac Life Support Instructor Renewal	3.0	.35	4
Jan 13-14	Des Moines: Pediatric Advanced Life Support Provider	11.5	1.4	11
Jan 16	Iowa City: Paramedic Training Program begins	—	—	—

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