

EMS Update

An Emergency Medical Services Learning Resources Center Publication

Fall 2008
Vol. 29, No. 3

Catastrophic flood activates emergency response teams

Right, flooding at the intersection of Highway 6 and First Avenue in Coralville on Monday, June 16. The Iowa River crested in Coralville on Sunday, June 15 at 716.97 feet above sea level. Iowa's worst natural disaster displaced 40,000 Iowans and disrupted the lives of thousands of others. More than 1,500 miles of roads were damaged.

During a disaster, it is vital that all hospitals have a consistent command structure and communications flow with other hospitals and emergency responders. Numerous agencies worked together during the Flood of '08 to prevent deaths, significant injuries and damage to structures.

The Johnson County Emergency Operations Center (EOC) opened June 9, in Iowa City, as authorities watched Waterloo and Cedar Falls flooding and were concerned that it would move into Cedar Rapids, the Coralville Reservoir spillway or Iowa City.

On June 12, University of Iowa officials activated the Hospital Emergency Incident Command System (HEICS) in anticipation of an evacuation of a Cedar Rapids hospital.

The Cedar River in Cedar Rapids, Iowa, reached 31.8 feet on June 13, 2008, flooding 1,300 square blocks, 4,000 homes and 800 businesses. Mercy Medical Center evacuated all of its 183 patients early that morning as water levels reached two inches in the emergency department and threatened the emergency generator system.



Photo by Corey Schjoth, Iowa City Press-Citizen

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Flood cont'd



Mike Hartley

Mike Hartley, PS, disaster preparedness coordinator, Department of Emergency Medicine, UI Health Care, was assigned off-site to the Johnson County EOC to serve as an interface between the hospitals', cities', counties' and state's Emergency Operations Centers.

Hartley spoke with the UI Health Care bed placement center twice each day to determine the number of patients, their injuries and illnesses in case the hospital needed to evacuate or create capacity to accept patients evacuated in Cedar Rapids. (Potential flooding in Iowa City prevented the transfers.)



Jonathan Simmons, DO

Jonathan Simmons, DO, assistant professor, Department of Anesthesia, earned his master's degree in Bio-security and Disaster Preparedness and is board certified in Disaster Medicine. He is chairperson for the UI Health Care Disaster

Management Emergency Preparedness Team. Simmons served as an advisor to the command staff during the flood to help ensure that the day to day hospital operations remained safe and the infrastructure, patients, staff, and families were protected.

"Because we are the main tertiary care center and Level I Trauma Center in Iowa," says Simmons, "we felt it extremely important to maintain full operations in terms of patient care.

"We accepted patients with emergent/urgent needs, but reduced elective surgeries in the interest of safety. The road closures and potential flooding in Iowa City could have prevented patients and staff from returning home," says Simmons. "We also determined if routes were safe for ambulances to get patients to UI Hospitals and Clinics."

Hospital staff deemed key to continuing appropriate care, and living north of the I-380 closure, parked at the Cedar Rapids airport and UI Health Care supplied van shuttles back and forth for four days.

"John Staley (senior associate director, UI Hospitals and Clinics) and Ann Williamson (associate vice president, UI Health Care and chief nursing officer, UI Hospitals and Clinics) played a pivotal role in the disaster when they developed a plan to fly essential nursing and pharmacy personnel here," says Simmons. "The 52 staff members live in the Quad Cities, but could not travel I-80 while a portion was flooded near the Cedar River and closed for four days."

If Iowa City's Burlington Street's second bridge would have closed, there would have been no east or west road across Iowa City if I-80, near exits 242 and 244 over the Iowa River, would have been shut down.

Iowa City Mercy Hospital, in conjunction with the Iowa National Guard, created a temporary AirCare helipad on the roof of Mercy's parking ramp to help transport critically ill patients across the river if the bridges closed.

"We were fortunate that the bridges remained open," says Simmons. "Mike Hartley was very effective at keeping us informed during this disaster. Communication was very strong throughout the University of Iowa, county, city and state."

Hartley helped determine routes, arranged for supplies and developed contingency plans if the hospital lost power, water, steam, resources, or road access.

"The rising Iowa River threatened the University of Iowa and Iowa City water treatment plants," says Hartley. "The hospital had three days worth of bottled water and an additional three million gallons available in storage tanks.

"UI Power Plant tunnels were flooded which shut down steam for central sterilizing and hot water," says Hartley. "Four semis brought in portable steam, two boilers and the required accessories."

The Hospital Emergency Incident Command System conducts two exercises each year to prepare for a disaster that might affect University of Iowa Hospitals and Clinics.

"We must be ready to respond to any disaster, any day, any time," adds Simmons.



EMSLRC teaches and reaches out across Iowa for 30 years

For 30 years, the EMS Learning Resources Center (EMSLRC) has provided EMS programs for more than 70,000 physicians, physician assistants, nurses, EMTs and paramedics, and community citizens in 18 different states and two foreign nations.

The EMSLRC offers a broad spectrum of emergency medical training through its in-house and outreach programs and serves as the primary emergency medicine training department for UI Health Care.

Through the Center, specialists in emergency and critical care education provide a variety of EMS-related programs locally for University of Iowa Health Care staff and on an outreach basis throughout Iowa and the nation.



Doug York



Sam Murphy

"When the EMSLRC was first established in 1978, one of the main functions was to develop and provide high quality statewide emergency medicine education," says Doug York, PS, director, EMS Learning Resources Center. "This remains a priority to us. With the support of the Department of Emergency Medicine, the EMSLRC provides training where requested throughout Iowa and other parts of the country."

The June 1, 2007-June 30, 2008 fiscal year report revealed EMSLRC staff educated 6,071 participants and presented 41 different courses. Most of the courses are taught multiple times in Iowa City and across Iowa.

More than 150 outreach courses were delivered across Iowa. One popular program taken to the communities is the Critical Care Paramedic (CCP) which offers hands-on critical care instruction for experienced EMS providers.

"Outreach CCP courses have been presented 17 times across Iowa in nine different cities," says York.

Another course in demand is Advanced Trauma Life Support (ATLS) for physicians who have primary responsibility for managing the critically injured patient.

"Our ATLS courses fill up months in advance so we strongly encourage physicians to enroll as soon as possible," says Samantha Murphy, secretary, EMSLRC.

"In addition, the Advanced Cardiac Life Support and Pediatric Advanced Life Support courses are popular and registrations close months in advance.

"Some courses require additional documentation to be submitted with registration so we strongly encourage participants to read the entire course brochure carefully," says Murphy.

Course brochures with registration forms will be available in December on the EMSLRC web site at www.uihealthcare.com/emslrc/. Online registration begins in 2009.

"We add courses to meet the expanding educational needs of emergency medical care," says York.

Ginny Henry manages one of the 25 largest American Heart Association (AHA) Training Centers in the nation. She also chairs Iowa's Emergency Cardiac Care Committee which promotes AHA emergency care programs to healthcare providers, caregivers and the general public.



Henry leads largest training center and is named Iowa's ECC chairperson



Ginny Henry

The American Heart Association's Emergency Cardiovascular Care (ECC) Program's mission is to build healthier lives, free of cardiovascular diseases and stroke by improving the Chain of Survival (Early access, Early CPR, Early defibrillation, Early advanced care).

ECC programs increase public awareness of the importance of CPR and ensure more public access to defibrillation. New treatments have improved the possibility of survival from cardiovascular emergencies, cardiac arrest, and stroke.

Ginny Henry, RN, PS, training center coordinator, EMSLRC, recently began her two-year term as chairperson for Iowa's ECC committee. Every state has its own ECC committee and programs to educate

healthcare providers, caregivers, and the general public to respond to emergencies.

"The committee includes representatives from each Iowa ECC task force (eastern, central, and western areas)," says Henry. "Each member must be a Basic Life Support, Advanced Cardiac Life Support or Pediatric Advanced Life Support instructor. They can be healthcare professionals or lay people."

Iowa has 18 American Heart Association Training Centers; Henry manages one of the largest in the nation with 34,344 course completion cards issued between July 1, 2007 and June 30, 2008.

"Iowa does a good job training healthcare professionals," says Henry, "so we want to target bystander CPR training in the communities. We must recruit new instructors to step in for turnover or those retiring."

Joan Fishburn, LPN, ECC coordinator, Mercy Medical Center, Cedar Rapids, has known Henry for 30 years. "Ginny is pleasant and very knowledgeable," she says. "She is perfect for the chairperson role and will get the job done!"



Dr Azeem Ahmed

Our medical director says. . .

"As fall settles in across our state, I hope that you had a wonderful summer despite the many challenges that Iowa faced due to Mother Nature. In this issue, I am pleased to update you on two programs here at the University of Iowa Hospitals and Clinics which are very close to my heart – AirCare and the EMSLRC.

AirCare II based at Covenant Medical Center in Waterloo completed 20 years of distinguished service to our citizens and continues to be a thriving part of our air medical program. The medical and aviation crew are first rate and provide exceptional care in hopes of having exceptional outcomes. I look forward to many more years of success, and am honored to work with them.

Another group that continues its 30-year tradition of excellence here in Iowa City is the EMSLRC, which continues to be a center of solid EMS education. With the mobile simulation vehicle, a move towards on-line education and greater outreach, the staff of the EMS Learning Resources Center is looking forward to working with you to achieve your educational goals and maximize the care that you provide in your communities.

We are fortunate to be a part of an overall Department of Emergency Medicine whose major goal is to take the excellence we have here in Iowa City, and spread it to every corner of Iowa. We look forward to working with you, as we strive to achieve our mission.

Dr Ahmed is associate chair for EMS and Community Relations; clinical associate professor, Emergency Medicine; flight physician; and medical director, AirCare and EMSLRC, University of Iowa Health Care.



AirCare II serves Iowans for 20 years

AirCare II Staff:
Steve Fuller,
Connie Niemeyer,
Kris Baerenwald,
Maria Farmer,
Heather Brodie,
Linda Burrage,
Carol Ratchford,
Mark Mahler,
Deb Bagenstos,
Ann Schott,
Diane Lamb,
Steve Carey,
Tom Pingel,
Larry Wildeboer
and Dr Azeem Ahmed.
Not pictured:
Jeff Graham,
Lee Ridge,
Vance Vonderohe
and Dennis Wood.

The University of Iowa Health Care's two AirCare helicopters rapidly and safely transport critically ill and severely injured patients 24 hours a day, delivering appropriate medical care en route.

The AirCare service began in 1979 in Iowa City and was the first hospital-based emergency air medical program in Iowa and one of the first 15 programs in the nation. AirCare II first flew 20 years ago—June 1988—out of Waterloo, Iowa, providing a more rapid response to patients in north central and north-eastern Iowa.

Based at Wheaton Franciscan Healthcare, AirCare II has flown more than 6,500 flights in the past 20 years. They transport approximately 400 patients each year with 434 patients flown between July 1, 2007 and June 30, 2008.

The Air and Mobile Critical Care program is based at UI Hospi-

tals and Clinics, Iowa City. AirCare I flies out of Iowa City with two critical care registered nurses; AirCare II flies with one critical care registered nurse and one critical care paramedic specialist. Together they provide air support to the people of central and eastern Iowa as well as western Illinois with extended coverage capabilities into Wisconsin, Minnesota, and Missouri.

"Basing an AirCare helicopter in Waterloo allows for rapid aeromedical transport of patients from accident scenes in the Waterloo area and surrounding communities and counties," says Deb Bagenstos, RN, CEN, chief flight nurse, AirCare, Wheaton Franciscan Healthcare, Waterloo, Iowa. "In addition, it allows for transport of patients from other hospitals in northeast Iowa to all Waterloo area hospitals. It also saves precious minutes in transporting those patients who require comprehensive tertiary care services at the University of Iowa Hospitals and Clinics."

All AirCare flight nurses have extensive emergency department and intensive care unit nursing back-

grounds. The flight crew performs a variety of advanced medical skills before and during air medical transport, such as endotracheal intubations and surgical airways.

They hold required certifications in Advanced Cardiac Life Support (ACLS), ACLS for the Experienced Provider, Pediatric Advanced Life Support and Neonatal Resuscitation Program. In addition, all nurses are certified in the Trauma Nursing Core Course. Some crew members are certified instructors in these programs.

The flight teams work side-by-side to provide the highest level of care for the critically ill and injured patients they transport.

"Some of our flight paramedics are firefighters and have special skills in extrication, patient packaging, and other techniques and emergency experience they gain with their fire departments," says Bagenstos.

"Air transport is important to Iowa because we are a rural state. Many small hospitals stabilize patients very well and request air transfer to hospitals so the patients may receive the critical care they require," she adds.



Difficult remote EMS rescue of four-year-old near drowning victim

Canoeing, as pictured above, is popular in the Volga River Recreation Area in northeast Iowa.



Charles Jennissen, MD

Fayette county EMS responders rescued a 4-year-old girl who had been trapped beneath an overturned canoe on the Volga River.

The girl, with her parents, and 3-year-old brother, were canoeing July 20 when they hit a log under the water and flipped, according to Scot Michelson, park ranger, Iowa Department of Natural Resources.

"All four were in the canoe," says Michelson. "All of them popped right back up except the little girl."

Michelson says all members of the family were wearing life jackets but the girl's foot became caught on the canoe. She remained under water for an undetermined amount of time.

Another couple on the outing with the family and traveling in kay-

aks, performed CPR and called 911 from a cell phone.

Authorities were called to the area at approximately 2:30 pm about a possible drowning on the Volga River—which was running unusually high and fast.

Kris Kamm, PS, an EMSLRC Paramedic Specialist Training Program graduate and Northeast Iowa Medical Transport paramedic, responded in her private car and met the ambulance at the park entrance.

"The family was in a spot where vehicles couldn't reach," says Kamm. "Deputies tried to locate them by alternately running the siren and turning it off; the family called dispatch to identify sounds they heard loudest. We moved along a gravel road and an archery range to determine if we were close to the family."

After nearly an hour of searching, Michelson and a Fayette County deputy finally identified the family's location but had not made visual contact yet; they had only been shouting to each other.

Reggie Gross, PS, also a graduate of the EMSLRC Paramedic Specialist Training Program, and Kamm started down the cliff on foot. It had rained the night before; the air temperature and humidity were extremely high. The family was waiting approximately one-quarter mile below them on the river bank.

"We sat and slid down the last 500 feet of the river bank because it was so steep, muddy and rocky," says Kamm.

"We found the girl breathing, although her lungs sounded wet and respirations were more shallow than normal. We passed her up the hill from one climber to the next; the last person climbed around the group to the top of the line again.

"We finally handed her to the AirCare flight members in the back of a pick-up truck for a five-minute transport to our ambulance. The terrain prohibited the ambulance from coming any closer," says Kamm.

The AirCare crew stabilized and intubated her in the ambulance, then transported her to the helicopter staged about a half mile away.

AirCare II flew the girl to University of Iowa Hospitals and Clinics in Iowa City where Charles Jennissen, MD, associate professor, Department of Emergency Medicine and director, Pediatric Emergency Medicine, evaluated the child in the Emergency Treatment Center.

"The girl was in severe respiratory distress from aspiration of river water when she arrived here," says Jennissen. "She was in critical condition. . .but alive and stable. The team effort began with bystander CPR at the scene to get her breathing again.

"EMS responders had a tremendous challenge getting to her. It was wilderness medicine right here in Iowa. The heroic rescuers had no landmarks to locate the victims resulting in a long extrication in difficult terrain."

Michelson says the Iowa DNR is evaluating a system to use numbers as mile markers and help emergency personnel find people on the river.

The girl was released from UI Hospitals and Clinics July 24, and is back to her normal activities.



Two new faculty join emergency team

Ken Philbeck, MD, associate, clinical, completed a family medicine residency in Fort Collins, Colorado, then chose to further his training through the Iowa Emergency Medicine Residency Program. After

completing the Iowa program in June, Philbeck elected to stay in Iowa City and join the UI Health Care Department of Emergency Medicine faculty.

"I stayed here in Iowa because of the 'Stockholm Syndrome'," laughs Philbeck. "No, seriously, I chose to stay at the University to help continue building a top quality emergency medicine residency. I also want to keep learning from great colleagues and teachers here.

"My emergency medicine interest is primarily ultrasound, and we are in the process of creating a top notch curriculum to train our residents in this field," adds Philbeck.

Christine Miyake, MD, assistant professor, clinical, completed her emergency medicine residency training at the University of Rochester Medical Center, Rochester, New York, before coming to Iowa.

"University of Iowa Hospitals has a wonderful reputation," says Miyake. "Iowa City is also a great place to live with quality public schools." Miyake's special interests are sepsis and critical care.

We are happy to send EMS Update, on a complimentary basis, to anyone who is interested in the subjects we cover. To receive or stop receiving EMS Update, or to change your address, email jeri-irvine@uiowa.edu

EMS Update

EMS Update is published three times yearly by the EMS Learning Resources Center for emergency medical service professionals. Correspondence should be addressed to *EMS Update* Editor, EMSLRC, the University of Iowa Hospitals and Clinics, 200 Hawkins Drive, 6-South, GH, Iowa City, IA 52242-1009

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Photos: Page 1, Corey Schjoth, Iowa City Press-Citizen; Page 2, Steve Larson, University of Iowa Health Care.

Printer: University of Iowa, Printing Department

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All e-mails will receive a response.

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People with disabilities are welcome at the University of Iowa Hospitals and Clinics where reasonable accommodations will be made upon request. Please contact the UI Hospitals and Clinics Department of Social Service, 319.356.2207.



A message from Kate Carinder

Invest in a Healthier Future

Invest in a healthier future by giving to the UI Department of Emergency Medicine today. You can support this life-saving medical resource by:

- Providing an outright gift (give online at www.givetoioowa.org/em)
- Making a contribution of marketable stocks or mutual funds
- Taking advantage of an employer's matching-gift program
- Establishing a planned gift

I encourage you to support UI emergency medicine by making your gift today. Thank you!

For more information, contact Kate Carinder, associate director of development, major gifts, at The University of Iowa Foundation, 319.335.3305 or 800.648.6973, or kate-carinder@uiowa.edu.

EMERGENCY MEDICINE HONOR ROLL

(July 1, 2007, through June 30, 2008)

Aguilar, Agustin, Jr., Solon, Iowa
Ahmed, Azeemuddin, Coralville, Iowa
Ahmed, Faaiza Z., Coralville, Iowa
Andrizzzi, Alison H., Coralville, Iowa
Andrizzzi, Flynn A., Coralville, Iowa
Bailey, Olivia E., North Liberty, Iowa
Buresh, Christopher T., Coralville, Iowa
Christensen-Szalanski, Carlyn M., Iowa City
Collaguazo, Dana M., Iowa City, Iowa
Dickson, Eric W., Coralville, Iowa
Graber, Mark A., Solon, Iowa
House, Hans R., Iowa City, Iowa
Hove, Harlo D., Solon, Iowa
Jennissen, Charles A., Cedar Rapids, Iowa
Jones, Catherine E., Princeton, Mass.
Linder, Jo Ellen, Falmouth, Maine
Nugent, Andrew S., Coralville, Iowa
Nunge, Mark R., Coralville, Iowa
Peters, Bobby X., Riverside, Iowa
Peters, Nisha, Riverside, Iowa
Solish, Samuel, Falmouth, Maine
Stange, Laurie L., Cedar Rapids, Iowa
Takacs, Michael E., Coralville, Iowa



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RETURN SERVICE REQUESTED

EMSLRC course calendar

2009 courses will be listed in December @ www.uihealthcare.com/emslrc

On-line course registration begins December 1.

2008

- Nov 3 Iowa City: EMT-Basic Training Program begins
- Dec 3 Iowa City: Neonatal Resuscitation Program
- Dec 5 Iowa City: Advanced Cardiac Life Support Renewal

2009

- Jan 5 Iowa City: Paramedic Specialist Training Program begins
- Jan 10 Des Moines: Pediatric Advanced Life Support Provider
- Jan 10 Des Moines: Pediatric Advanced Life Support Provider Renewal
- Jan 30-Feb 1 Iowa City: EMS Refresher
- Feb 9-March 3 West Des Moines: Critical Care Paramedic
- Feb 13-15 Iowa City: EMS Refresher
- Feb 28-Mar 1 Carroll: Prehospital Trauma Life Support Provider
- Mar 9-10 Iowa City: Pediatric Education for Prehospital Professionals
- Mar 16-17 Iowa City: Trauma Nursing Core Course

- Mar 23-24 Iowa City: Geriatric Education for Emergency Medical Services
- Apr 2-3 Davenport: Trauma Nursing Core Course
- Apr 13-14 Iowa City: Prehospital Trauma Life Support
- Apr 20-30 Iowa City: Critical Care Paramedic Program
- May 4-5 Iowa City: Advanced Cardiac Life Support Provider
- May 6 Iowa City: Advanced Cardiac Life Support for the Emergency Provider
- May 8 Iowa City: Neonatal Resuscitation Program
- May 18 Iowa City: EMT Basic Training Program begins
- May 29 Iowa City: Emergency Nursing Pediatric Renewal
- July 6 Iowa City: Paramedic Specialist Training Program begins
- Aug 3-4 Iowa City: Pediatric Advanced Life Support
- Sep 8-9 Iowa City: Pediatric Education for Prehospital Professionals
- Sep 17-18 Iowa City: Advanced Trauma Life Support Student
- Sep 21-22 Iowa City: Geriatric Education for Emergency Medical Services
- Sep 24-25 Oakdale: Trauma Nursing Core Course