

This is what we do.

How many professionals can say they make a positive difference every day? Emergency health care providers can, every time they lace up their shoes and go to work. The stories that follow are just a few of the thousands of EMS calls and emergency room visits that happen every day across the state. In honor of Texas EMS Week, Trauma Awareness Month and Stroke Awareness Month, we salute those who make a difference.

This is why.



Eddy Eichner was driving in Austin last fall when he suffered cardiac arrest. His car ended up in a ditch. Austin-Travis County licensed paramedics Ted Larison, middle, and Adam Stevenson, along with Austin Fire Department personnel, treated Eichner using the “pit crew” model. Eichner was then transported to Seton Medical Center, where they found 100 percent blockage in his main artery. Eichner survived and is grateful for the care he received. “I can’t thank these guys enough,” Eichner says.

Eddy Eichner October 11, 2010

Even if it’s at the wrong time, it can be in the right place. Eddy Eichner, a fit and healthy 49-year-old Austin man, wasn’t supposed to suffer a massive heart attack as he drove through Austin last fall. And while he did not crash his vehicle, he did end up in a ditch.

Lucky for Eichner, a witness who saw the accident called 9-1-1. Within minutes the Austin Fire Department

and Austin Travis County EMS (ATCEMS) arrived at the scene.

Firefighter Aaron Wernsman and Captain David Leonard with Austin Fire Department Station 19 B-shift performed CPR while the ATCEMS team administered cold saline intravenously and placed ice packs on Eichner’s groin, armpits and neck. The cooling activities were intended to lower his body temperature and preserve brain function during his transfer to Seton Medical Center Austin. At the same time, paramedics Ted Larison and Adam Stevenson administered Versed, a sedative, and Vecuronium, a paralyzing agent, to keep his body from shivering, which can raise body temperature. All in all, crews administered shocks six times before Eichner arrived at Seton.

ATCEMS followed a “pit crew” model – arranging paramedics and firefighters in set places around the patient, each with distinct roles to fill – which allowed paramedics to focus on preparing the patient for transfer. With firefighters positioned on either side of Eichner, the team can alternate employing consistent CPR.

The cold saline and advanced CPR techniques used to treat Eichner have increased survival rates in the field and improved long-term outcomes for cardiac patients. These practices are being used across the country and they have been widely adopted by Central Texas EMS teams today, but not all patients are a good fit. Circumstances for not using these techniques include patients who are under 18 years of age or patients who have experienced significant trauma-related injuries. In Eichner’s case, there was no trauma other than his cardiac symptoms.

As soon as Eichner arrived at Seton Austin, doctors rushed him to the cath lab. Eichner had 100-percent blockage in his right main artery. While stents were being

implanted, he went into cardiac arrest again. Dr. Matthew Stahlman, cardiologist at Seton Heart Institute, had to shock Eichner another 28 times to get his heart beating again.

"Less than 10 percent of people survive this type of cardiac arrest," said Stahlman. "I credit EMS for their strong teamwork and use of advanced techniques to transfer Eichner to us in the best possible condition. Thanks to their efforts there were no residual side effects or neurological damage."

Six months later, Eichner is back to enjoying life: reading, exercising and spending time with his wife and two children, a 17-year-old daughter and 15-year-old son.

"I can't thank these guys enough," said Eichner. "I've since met Ted and Adam, and I feel they really care about their patients and their work. They think on their feet and helped me survive. I am extremely grateful they were at my side when I needed them."

— Ellen Vander Linden

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Zachary Fore's near-fatal crash into a large oak tree might have derailed his hopes of a military career, but the experience made him appreciate emergency responders. He's now enrolled in paramedic school at Tyler Junior College. Medics on that call were Gayle Holt, LP, and Jason Williams, EMT-P.

Zackary Fore December 27, 2008

Zackary Fore loved his truck.

The 18-year-old Tyler resident took great pride in the big, cherry-red Ford F150, jacked up so that it sat high above the ground on 35-inch tires. He'd bought it from his nephew, who was 6-foot, five inches tall. At 5-foot, 8 inches, Fore jokes that he had to run and jump simply to get into the truck. Still, he loved it. "It was beautiful," he said.

And it was that truck Fore was driving to work at the country club a couple of days after Christmas in 2008. It was raining hard, and it fit his mood. He was a little peeved at having to go to work when the rest of his family was celebrating the holidays in Houston. And to top it off, he'd had a disappointing Christmas.

"I was upset because I didn't get the boots I wanted," he said.

So as he sped along Fifth Street in traffic, he saw there was a car parked in his lane. No problem, he thought, and sped up to pass the car next to him. He estimates he was traveling about 45-miles-an-hour in a 35-MPH zone. The truck began to fishtail and swerve out of control.

"And I caught the biggest oak tree in the neighborhood dead center on the driver's side," Fore says.

The wreck broke everything from his hip to his cranium, including all his ribs, and destroyed his spleen, punctured both lungs and a kidney, and delivered a traumatic brain injury. His mother later told him people who saw the wreck thought the coroner would be on the scene. Instead, Fore got lucky. Veteran paramedics Gayle Holt and Jason Williams responded in just three minutes from a nearby station.

"If it had been any longer, I probably wouldn't be here today," he says.

Along with help from the Tyler Fire Department, Holt and Williams treated Fore and rushed him to East Texas Medical Center, a Level I trauma facility. He stayed in a coma for a few days before they induced another. He spent a month at East Texas Medical Center then another three months at Medical City Children's Hospital in Dallas.

As a result of the wreck, Fore has made some

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significant changes in his life. He comes from a military family, so he had always planned to go into the U.S. Coast Guard after graduation and study to be an architectural engineer. The metal in his face dashed his hopes for a military career, so he began thinking about a new interest: emergency response. He hopes to ride in the ambulance again after he graduates from the paramedic program at Tyler Junior College.

"I know how much trouble I was in (after the wreck)," he says. "Maybe I will have the chance to save someone else's life."

And earlier this year, he decided he'd like to personally thank the people who rescued him that rainy day in December 2008. He recently met with medics Holt and Williams to update them on his progress and his new career. And to thank them.

"I was pretty messed up when they got to me, and I knew it would be really neat to try and find them," Fore says. "Doctors say they can't understand why I'm still here."

But Fore knows. "The only thing I can say is thank you. They saved my life."

— Kelly Harrell

Dan Dawson March 1, 2011

Dan Dawson was no stranger to teamwork in EMS.

Since retiring to the rural community of Hilltop Lakes in Leon County, the former school finance administrator had served at one time as assistant fire chief and an ambulance driver for Hilltop Lakes VFD. Still, when he began feeling shortness of breath in March of this year, he didn't want to believe it was anything to worry about. He told his wife of 37 years he didn't feel good.

"I told my wife I just felt odd," he says. "But then I started feeling an inescapable feeling of doom."

It was time to call 9-1-1. In a few short minutes, he had a bedroom full of first responders, people he'd known from his time at the fire department. It didn't take the crew long to realize they needed to transport.

"Our drive time (to a hospital) is 45 minutes, so we



Dan Dawson says his lesson was simple: If he hadn't listened to the warning signs his body was giving him, he wouldn't have made it that day in March. Helping him was a network of emergency responders, including two volunteer fire departments, an EMS provider, an air medical helicopter and hospital staff. The first responders were, from left, John Bergdahl, driver; Nancy Walls, EMT; and John Neukom, EMT. Dawson, second from right, has lived in Hilltop Lakes for about six years.

generally try to get on the road as soon as is practical, depending on the circumstances," says EMT John Neukom, one of the responders. Hilltop Lakes EMS is an all-volunteer BLS service.

Being loaded into the ambulance was the last thing Dawson remembers. Neukom says Dawson told them he was going to pass out and that EMT Nancy Walls grabbed a BVM while Neukom got the AED. He told the driver to change to Code 3 and radio for intercept with Jewett EMS, an ALS provider. When Dawson stopped breathing and had no detectable pulse, the AED authorized a shock, but there were still no vitals. The crew continued CPR and bagging the patient through a couple more rounds, continuing to use the AED, which did not authorize shock on any subsequent analysis. Finally, Dawson started breathing after several rounds of CPR.

Meanwhile, after getting a patient update from Hilltop Lakes, Jewett EMS had called for a rendezvous with PHI air medical. Normangee VFD had already begun setting up a landing zone. And in case you have

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not been keeping count, we're up to four players in this cardiac drama, and Dawson hasn't even gotten to College Station Medical Center, where they found a 95-percent blockage in one artery. He spent a week in the hospital where they implanted a pacemaker. He's grateful for the care he received at every point along the way, from the first contact with volunteers to the trained hospital staff.

"Their quick response is one of the primary reasons I'm here today," Dawson says. "Everyone did everything right."

Hilltop Lakes medic Neukom agrees. "This was truly a team effort," he says. "I'm sure that contributed to the positive outcome of this save."

And Dawson contributed in his own way. He says if he'd ignored his symptoms, he wouldn't be alive. "I think people need to understand the importance of listening to the warning signs your body gives you and to take action."

Since the incident, Dawson and his wife have settled back into life in rural Texas, far from the hustle and bustle of city life.

"We knew when we moved (to Hilltop Lakes) that we were 40 minutes from the hospital by car," Dawson says. "But one of the things we were impressed with was the EMS."

"I guess we were right."

— Kelly Harrell

Charlie Vaughn March 1, 2009

Illinois native Charlie Vaughn loves Texas

and he loves golf. And the Celina resident was hitting golf balls alone on what he calls his driving range – actually an undeveloped part of the new North Texas subdivision where he lives – when he started getting winded on March 1 of 2009. Then 49, Vaughn figured it was the 250-yard drives he was hitting, not his heart, causing the discomfort.

"I just passed it off," Vaughn says. Then he started sweating, then came nausea and pain in his chest and arm, the classic symptoms of cardiac arrest – and of the Vaughn family history. He threw his golf clubs in the



Charlie Vaughn was hitting golf balls when the first waves of nausea hit. He made it home and called Celina Fire Department, who was able to use the latest technology to transmit his information to the hospital, alerting the 'cath team.' Celina Fire Department personnel were commended for the save at a city council meeting. Front row, left to right: Ben Jackson, firefighter/EMT-P; Johnny Smith, firefighter/EMT; Charlie Vaughn; and EMS Division Chief Kyle Mills, EMT-P. From rear, left to right, Jed Carson, firefighter/EMT; Jon Brown, firefighter/EMT; Captain Keith Brumfield, EMT; and Marty Elliott, firefighter/EMT.

car for the short ride home. The minute he walked in the house, his wife knew something was wrong, really wrong.

"I was really having trouble breathing – gasping and sucking wind like I'd just run a marathon," Vaughn says. His wife dialed 9-1-1 and the EMS and fire crews arrived in just a few minutes. The crew was not happy with what they found.

"My blood pressure was so high I was in danger of stroking out," Vaughn says. "But all I could think of was one thing and one thing only: I was about to get a big needle stuck in my arm. I heard one of the medics say 'Put an 18-gauge in him and run him wide open.' I do not like needles."

The EMS crew loaded Vaughn while paramedic Kyle Mills, division chief with Celina Fire Department, transferred data from the 12-lead to alert staff at Centennial Medical Center-Frisco, about 15 minutes away. The ED and catheterization staff were ready and

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lung protective ventilation, administration of activated protein C (to control clotting in ischemic tissue) and controlling the patient's blood glucose.¹⁴

Conclusion

With both the growth of evidence-based medicine and the increased focus from insurers, both public and private, on payment for outcomes, the medical community is likely to increase its emphasis on prevention, recognition and treatment of sepsis. Although not every EMS system or hospital may have a "sepsis alert" program, EMS providers can play a critical role in the early recognition and urgent treatment of sepsis. EMS providers have the training and skill-set to treat hypoperfusion. These same skills apply to sepsis. When coupled with good patient assessment skills, EMS can play an increased role in the recognition and treatment of sepsis.

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waiting and a short time later, Vaughn was prepped and in the cath lab. Two days later, he was back home.

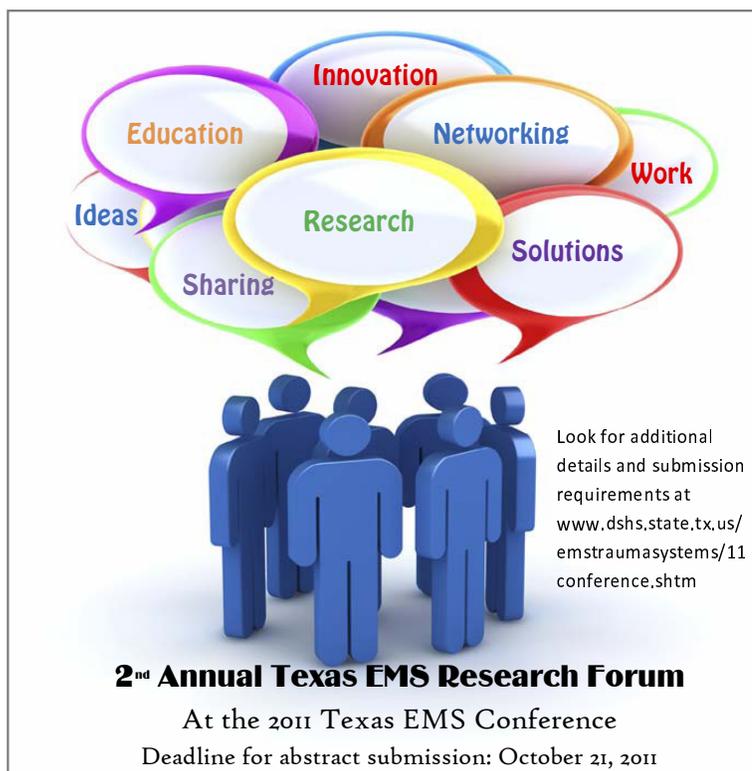
"And I'm pretty much back to normal," he says. He realizes that without the quick intervention from Celina Fire Department, he would not be here to celebrate 32 years of marriage with his wife this June.

"Basically, everything they did from the time they came in my front door was right. The biggest factor for having so little heart damage was how quickly they responded and the treatment they gave," Vaughn says.

Mills, the EMS division chief, says it even better. "To me, this is a story of why we do the things we do. The system of EMS is expensive – but I bet if you asked Charlie Vaughn and his family if it is worth it, they would say 'definitely.'"

That's a good bet.

— Kelly Harrell



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