

High tech EMS

Written by Sean Green
Tuesday, 11 December 2012 17:33 -

Use of cell phone apps and newest hardware gives Bossier City EMS a life saving edge

For Bossier City Emergency Medical Services, it's all about taking chaos and making it less chaotic.

And their continual technological upgrades make that task a little easier. Paramedics are using cell phone apps, Bluetooth, mechanical devices and lifts, and even a compressed natural gas fueled ambulance to improve response and results.

"It's all about patient outcomes," said Jeff Watson, Chief of Bossier City EMS. "Everything we do is based on improving the likelihood of patient survival."

"These guys are giving good care and our patients are better off, so when I get these patients, they're more stable," said Dr. Michael Williams, Bossier City medical director and ER director at Willis Knighton Bossier.

The city is working with a company to develop a cell phone app listing all EMS protocols and standing medication orders in a flow chart, as opposed to the old method of pages in a three ring binder. While it will be primarily for study, the ease of access will increase reference for paramedics.

"It's a generational thing, we want to better communicate with our employees. Most everyone is going to have an Android or iPhone," said Watson. "And it saves money. It's about half as expensive as printing a book for our employees."

Williams has also updated standing orders that will allow EMTs to provide a controlled amount of pain medication and other narcotics for trauma patients instead of waiting for the doctor to approve the dosage.

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“If you're out playing basketball and break your leg, they don't have to pull me out of a room for me to say, 'Okay, give him some pain medicine,’” said Williams. “Now it's in the protocol.”

But Watson stressed the new narcotics standing orders are closely defined.

“It's a limited amount, we have strict criteria about what they can give and how much,” said Watson.

The new app should be available for employees by Jan. 20, 2013.

Another example of life-saving technology is the Bluetooth in heart monitoring devices that can transmit data via cell phone signals to a receiving computer at the hospital. That alerts the doctor so he can call in the heart catheter laboratory to begin preparing for the arriving patient.

“The old way was no EKG transmission and they would call to tell they're coming, but we have to be sure and I don't activate the cath lab until they're in the ER as opposed to alerting them 20 minutes earlier and (the cath lab) is waiting on the patient,” said Williams.

The goal is to be under 75 minutes from patient contact to admittance to the cath lab. Bossier City averages about 20 minutes.

“You're talking about saving time that is critical. Those minutes that are shaved off can be very important when it relates to patient outcome,” said Watson.

But technological upgrades also come in hardware. The department is planning to be using the Stryker Power Load stretcher in its new CNG ambulance.

The stretcher can lift a 700 lb. person with the push of a button and includes a self-charging

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battery system. The mechanical device will save strain and manpower.

“The stretcher is a piece of equipment used on every call,” said Watson. “It’s expensive up front, but when you look at it long term, (reducing) one back injury (to an EMT) will pay for it.”

“I’ve had (paramedics) bring in a 635 lb. man recently, it took five guys to get him in. With this, it’s the push of a button,” said Williams.

This device will be installed in the proposed CNG ambulance. The city is working with an Alabama company on the emergency vehicle and trying to get its chassis approved. Both should come online in summer to fall of 2013.

Other upgrades include the cardiac arrest devices the Lucas Device — a CPR machine — and ResQPOD — valve that increases circulation — now available on all fire trucks. A New Orleans fire department study showed drastically improved outcomes when these devices are used in tandem.

The city has also evolved in its use of the fire and EMS services, by including basic life saving technology on fire trucks. This is to increase response time in an emergency call while the ambulance serves as transport.

“We may be out of ambulances, but there’s always that fire truck in the general area,” said Fire Chief Brad Zagone.

Average response time for a firetruck is 3:40 while an ambulance can average five to 12 minutes.

“Studies show that the quicker you receive CPR, the better chance of survival. There are 10 fire trucks that can start CPR as opposed to only four ambulances,” said Watson.

“For example, if we receive an EMS call at the mall and the ambulance (at the city’s main

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station) is busy, the nearest ambulance would be on Traffic Street near DiamondJacks. But there are two fire trucks (at the city's main station) and others a lot closer than that ambulance," he added.

More importantly, an ambulance crew can give basic medications, start IV's and get patients stats on the way to the hospital so doctors and nurses can begin treatment upon arrival.

With the speed of response time and the minutes saved by getting basic medical attention while en route to the hospital, Williams stressed that a resident who suspects he or she is having a heart attack would be better served calling 911 instead of driving to the hospital.

"If you're having chest pain and drive yourself, you may pass out or go into cardiac arrest and get into a wreck," he said.

And Bossier City's EMS is dedicated to constantly improving its technology. The city attends the yearly Gathering of Eagles conference in Dallas, Texas that features the latest life-saving technology.

"We'll go and discuss the information and see what makes good sense. We come back with several ideas and change our protocols and equipment," said Williams.

"We're keeping up with the times," said Watson. "As things change in patient outcomes, we try to come back and do that. And we're lucky to be well funded in Bossier City."

The EMS department is funded by a \$10 fee on citizens water bills and all the technological upgrades have been budgeted for and approved yearly by the Bossier City Council. There are no out of pocket expenses for Bossier City residents to receive medical services.