

# AFD first in U.S. with new heart monitor

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AURORA — Russell Glass remembers how it used to be.

He remembers the big orange boxes, 30 pounds each, that Aurora Fire Department paramedics had to bring with them on every call. The boxes contained a rechargeable phone system, which the medics would use to give diagnostic information to emergency room doctors. The orange box did nothing else — the paramedics' heart monitors and defibrillators were in a separate box, which had to be lugged around as well.

Technology wasn't much more advanced than that when Glass became a paramedic 23 years ago. Now Glass is the department's paramedic coordinator, and he's just wrapped up a three-year project to bring the latest diagnostic breakthrough to Aurora.

It's called the Philips HeartStart MRx defibrillator, with Q-CPR technology courtesy of Laerdal Medical Systems. And according to Glass, Aurora is the first fire department in the country to utilize it.

"I'm from that first generation of paramedics," Glass said, while showing off the HeartStart. "Seeing this just boggles my mind. It's the best piece of equipment for an ambulance I have ever seen."

A far cry from the orange box, the HeartStart unit uses a cell phone with Bluetooth technology to transmit data directly to hospitals and heart doctors. And the data it transmits is now the most precise and complete it's ever been, Glass said.

In addition to a 12-lead bi-phasic heart monitor, which offers a total picture of the heart from 12 different angles, the HeartStart measures blood pressure, oxygen levels in the blood and CO2 levels in the lungs. It can administer medications through IV units, deliver precise electric shocks based on age and weight and keep perfect records of every medical action it takes.

All that in a package that weighs about 16 pounds.

But the real feature is the Q-CPR technology, which gained FDA approval in November and is just now being rolled out. It uses a pre-recorded voice to offer feedback and instructions on proper CPR. It measures the time between chest compressions and sounds alarms when those compressions stop for longer than 15 seconds.

"The city spends a lot of money on training city employees in CPR," Glass said, "and we need to be

good at it. This will help us in the field."

The AFD ordered 12 HeartStart units at a cost of \$220,000. They will be placed in each of the department's eight ambulances, as well as its three alternate response vehicles — basically fire trucks that can shuttle paramedics to outlying areas of the city.

The city picked up two-thirds of the cost, and Glass said it took nearly two years to convince the City Council to approve the purchase of new equipment. The remainder was covered by the city's Foreign Fire Tax Board, which administrates the 2 percent tax charged to insurance providers not incorporated in Illinois.

According to Glass, the AFD's 95 paramedics make more than 10,000 ambulance runs a year, and they use a heart monitor unit like the HeartStart on 40 percent of those calls. The paramedics have been training on the new unit for weeks, although Glass said that the older heart monitor, in use for eight years, will remain on board the ambulances until the medics are completely comfortable with the HeartStart.

"I think this will be a truly pioneering device for us," Glass said. "We have a lot of talented people here, and I can't wait to put these tools in their hands and see what they do with them."

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