



Rene Lefebvre, John Kinney, Heather Makechnie, and Jeff Clark take a break from learning to use the CPR compressions machine that's strapped to the dummy on the table. The unit belongs to Franklin Fire Department, but Andover Emergency Medical Services is starting a fund-raising campaign to purchase a unit for Andover. The \$16,000 machine can be a lifesaver. According to Rene, "It does CPR compression at the correct rate and distance. While the machine is operating, the EMTs are free to administer oxygen and start IV lines for meds. The best part is that the machine never gets tired. "Another big benefit is that the machine can do compressions when we are moving down narrow stairs and carrying the patient to the ambulance. This machine, along with a defibrillator and the meds we carry, give the patient the best chance for a positive outcome." Photo: John Bridgmon

## Andover EMS Needs a New Tool to Aid CPR

By John Kinney, Chief, Andover EMS

911 emergency medical calls are made for many reasons. Our volunteer emergency medical technicians (EMTs) never really know when or for what reason their pagers may be activated. Of all the reasons, few can match the urgency for a sudden cardiac arrest – when the heart unexpectedly stops pumping and thus blood circulation stops. A clear majority of cardiac arrests are caused by specific cardiac conditions, however a wide range of other events can cause a cardiac arrest, for example: drowning, asthma, anaphylactic shock or traffic accidents. With a sudden cardiac arrest, the patient quickly becomes unconscious, without any subsequent breathing or pulse. Sudden cardiac arrest remains a leading cause of death and can strike even the young and athletic. Sadly, 95% of all sudden cardiac arrest patients die before they reach the hospital. Unfortunately these figures have not changed throughout the years. If advanced care is readily available, maybe as high as 25-30% of all patients could survive.

Sudden cardiac arrest can be reversible if the patient receives immediate care and the cause of the arrest can be found and treated appropriately. Ideally, with a witnessed cardiac arrest, a 911 call for help is made and chest compressions are started immediately to sustain blood flow to the patient's brain. If needed, an early shock from an automated external defibrillator (AED) can potentially restart the heart's pumping function. These actions together with advanced cardiopulmonary resuscitation (CPR) provided by swift-acting

EMTs and followed by attentive hospital care are an integral part of the rescue activities that are called the chain of survival.

### CPR Quality Matters

Many studies show that the quality of CPR prior to defibrillation directly affects clinical outcomes. Inconsistent and/or shallow chest compressions are strongly associated with defibrillation failure. This is most often the result of less-than-optimal positioning between patient and rescuer during transport as well as rescuer fatigue. Every interruption in chest compressions causes the coronary perfusion pressure to drop – a pressure that is correlated to successful restoration of heart rhythm. The longer the pre-shock pause is, the lower the success of the defibrillation.

Effective chest compressions deliver vital oxygen to the brain and can prime the heart for a successful shock. Maintaining sufficient coronary perfusion pressure during cardiac arrest improves the likelihood of return of spontaneous circulation (ROSC). However, as any rescuer or caregiver knows, performing manual CPR in the field according to current guidelines can be difficult and tiring. To make matters worse, Andover's distance from Concord and Dartmouth hospitals, where cardiac arrest patients are likely to be transported, can result in a doubling of travel time.

### A New Tool

The LUCAS Chest Compression System is designed to deliver uninterrupted compressions at a consistent rate and depth to facilitate ROSC. It delivers automated

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## Andover Fire Department Raffling a Kayak

Stop by the tent on the Village Green.

By Rene Lefebvre, Chief, Andover Fire Department

July is a very good month. The sun is warm, many are enjoying vacations, and the Andover Fire Department gets to enjoy our Fourth of July activities and our barbeque. The spirit of our nation's birth is renewed, and Andover celebrates the holiday with grace and pride.

My thinking, however, has been moving beyond just the celebration of the day and more about our nation. It seems that we, as a country, are facing more challenges beyond our shores. Although our nation has faced incredible dangers through our history, we still pay a high price for our freedom, even today.

The debt that we pay as a nation more often than not must be paid by our men and women in uniform. We call upon our very best to leave their families and take incredible risk. Asking for their service for multiple deployments shows their unselfish dedication to our nation.

We need to think about their service

and dedication as we enjoy our freedom with our families this year. Take a little time to thank our service people; we owe them much.

### Fourth of July

Our tent on the Village Green will be a busy place on the Fourth. We have a very nice kayak with a paddle, life jacket, and this year, a fishing pole. A \$1 chance is all it takes to win. We have fresh water and snow cones.

We will be adding a room to our tent space to make space for the Andover Emergency Medical Services team. They will be demonstrating a lifesaving cardiac compressions device. The team is working to raise the \$16,000 needed to purchase the machine. Please stop by and see how CPR is accomplished at the EMT level. The tool is amazing, and the EMS team is pretty good, too.

To our men and women in uniform: Thanks for your service! Please be safe, and if possible gain some comfort in the knowledge that we, your emergency services, are here to serve your family, whatever the need.

To everyone: Have a happy and safe Fourth of July celebration!

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**TOWN OFFICES**  
 and Town Clerk will be  
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**CHICKEN BBQ**

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**Raffle: Red Kayak**

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