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5 things to know about AEDs after a defibrillator helped save Damar Hamlin

By Laura Williamson, American Heart Association News

We've all walked past them: Little red, yellow or green boxes with hearts on them and the letters "AED." They can be found in office buildings, gyms, schools, airports, shopping malls – almost anywhere large crowds gather.

These little boxes can save lives. But few people use them.

An AED – short for automated external defibrillator – is an easy-to-use medical device that can restore a normal heart rhythm to someone who has gone into cardiac arrest. Defibrillators recently received national attention when one was used to save the life of Buffalo Bills player Damar Hamlin, who collapsed on the field in Cincinnati following a tackle. Hamlin is now recovering at home.

He is one of the lucky ones. Receiving immediate CPR and an electric shock from a defibrillator are the key drivers of survival for the roughly 350,000 U.S. adults who go into cardiac arrest outside of a hospital each year. But according to American Heart Association statistics, bystanders administer CPR about 40% of the time and AEDs even less so. About 1 in 10 people who have cardiac arrests in public get this type of help.

Here are five critical things people should know about AEDs and why experts say the public shouldn't be afraid to use them.

They are a person's best chance for survival

While out-of-hospital cardiac arrest survival rates vary across the United States, those with the best chance for survival have two things in common: They quickly received CPR and an electric shock from an AED, said Dr. Mary Ann Peberdy, a professor of medicine and emergency medicine at Virginia Commonwealth University in Richmond.

"One of the reasons Hamlin had such good neurologic outcomes and a week later was tweeting with friends was that he had early CPR and early defibrillation," she said. "Unequivocally, these devices save lives and Hamlin is a perfect example of that."

A defibrillator can be manual, used by trained health care personnel to deliver a shock. Or it can be automated, available for anyone to use, with the device determining if a shock is needed. The

Buffalo Bills and the University of Cincinnati Medical Center, where Hamlin was treated, did not respond to questions about which type of defibrillator was used on the field to restore Hamlin's heartbeat.

Call 911 and start CPR first

If someone collapses, the first thing to do is check for signs of life, such as whether the person is breathing normally, Peberdy said. Sometimes people in cardiac arrest can look as if they are breathing with "agonal breaths," when breathing is abnormal or it appears the person is gasping for air.

For a teen or adult who suddenly collapses, immediately call 911 and begin CPR by pushing in the center of the chest for 100 to 120 beats per minute. 911 operators also can guide rescuers through CPR.

"Always call 911 first," said Dr. Ashish Panchal, an emergency medicine specialist at Ohio State University's Wexner Medical Center in Columbus. "That gets more help to you. Then push hard and fast."

The chest compressions keep blood flowing to the heart and other organs, Peberdy said, and can prolong the time a shock is effective to restore a normal heart rhythm.

Both Panchal and Peberdy, who helped write the 2020 AHA guidelines for CPR and emergency cardiovascular care, stressed that CPR should not be stopped to go look for an AED. A second bystander should do that. An AED is often available in public settings, but people may not realize it is there or that it can be used by anyone to save someone in cardiac arrest.

An estimated 15% of cardiac arrests in adults happen in a public setting. While there is no standard place to store an AED, they are often found on the wall near an elevator, Panchal said.

"If you are in a public building, ask at the front desk," he said.

There is also an app from the PulsePoint Foundation that identifies where registered AEDs are located, though not all devices are registered, Peberdy said.

Anyone can use an AED – even a child

"The great thing about the AED is that it will tell you what to do," Panchal said. "It walks you through it."

Inside the box are pads and a diagram that shows where to place them on the bare skin. Once the device is turned on, a voice tells the person using it exactly what to do. Some devices offer this instruction in Spanish, but most are English-speaking.

The first thing the AED will do is determine whether an electric shock is needed by analyzing the person's heart rhythm. CPR should be stopped only while the machine is doing this analysis,

Peberdy said. "If no shock is advised, it will tell you to resume CPR. If there is a shockable rhythm, it will deliver the shock and afterwards will tell you to resume CPR."

There is no minimum age required to operate the device, Panchal said.

"A child can operate an AED," he said. "Children can also do CPR – and they can do effective CPR." If children are too young or not strong enough, they can call 911 and get immediate help.

You can't make things worse

"People should not be afraid to use these devices," Peberdy said. "Many people are afraid of making it worse. You're not going to make it worse. If someone is in cardiac arrest, they are technically dead."

If performed immediately, CPR can double or triple the chance of survival from a cardiac arrest outside of a hospital. "Waiting for emergency medical services to arrive takes up precious, precious time," Peberdy said.

You can't get in trouble

Some people may hesitate to help because they're afraid of the liability, Panchal said. "They worry if they're going to get sued."

Good Samaritan laws protect people who step in to provide lifesaving care, he said.

"All of us can be a lifesaver," Panchal said. "We can be that individual. We just have to choose to do it. Call 911, push hard and fast and ask someone to go get the AED. Those three steps can save a life."