Caledon to test using drones to better aid heart attack patients

Written By JAMES MATTHEWS

Flying drones can save more people from heart attacks in rural centres than conventional means of emergency response.

To that end, Caledon will take part in a program that will investigate the effectiveness of using drone-delivered automated external defibrillators (AEDs) to more quickly help people having heart attacks in out-of-the-way locations.

?Despite improvements in the way we actually treat patients with cardiac arrest in terms of CPR and drugs ? in a lot of rural communities, cardiac arrest survival is quite abysmal,? said Dr. Sheldon Cheskes.

Dr. Cheskes, medical director for Peel Region and the Caledon Fire and Emergency Services, is part of a research team behind the Community Responder AED Drone Program. He provided details about the program to Caledon's town council during its April 30 public meeting.

?Our current system provides superb survival from cardiac arrest,? he said. ?I think we can do better.?

Bystander CPR and AED use can make an immense difference in a person surviving.

Between 2015-17, Peel Region had about 600 cardiac arrests occur within 200 metres of a fixed AED unit. But that equipment was used in only 10 percent of those emergency situations, said Dr. Cheskes.

?But, when they were used, half of those patients survived,? he said. ?So it's clearly a very effective mechanism to actually save lives from cardiac arrest.?

The current AED strategy is to have the devices accessible in pretty much every public space possible. The hope is people will use them should somebody nearby have a heart attack.

Surviving cardiac arrest decreases about 10 percent per minute. The survival rate is improved about three times through bystander CPR. And the use of one of those public access AEDs increases a patient's survival chances by as much as 70 percent.

?The trouble right now, though, is the vast majority of cardiac arrests happen in private homes,? said Dr. Cheskes.

And that impacts the timeliness of administering defibrillation to a person in cardiac arrest.

The Community Responder AED Drone Program aims to improve patient outcomes through a two-pronged approach, said Dr. Cheskes.

Volunteers will be trained on how to use an AED and they will have access to FirstAED. That software will connect one of the trained volunteers to the person that requested the drone AED response. And, basically, the volunteer can walk the person through administering CPR and using the AED when the drone arrives.

Dr. Cheskes said such drones can travel about 125 km/hr and they can access patients over terrain that would hinder conventional paramedic ground response.

?We want to focus both approaches to be able to get AEDs earlier to patients who would benefit from them,? he said.

Caledon has many vast open spaces. A quick response to a heart attack on a farmer's field is often difficult.

?When you have a cardiac arrest in a rural community, your chances are really stacked,? said Dr. Cheskes. ?And the reason is it's very difficult to get in these big area to patients early enough.?

Drone use in rural centres decreases current response times by 11 minutes. And that's valuable time when a person's chance of survival is lessened by 10 percent for every minute waiting for help.

?That is a huge chance to save lives that we're currently not saving,? said Dr. Cheskes.

Coun. Annette Groves said the pilot program illustrates the finest use of technology to save lives.

Coun. Tony Rosa agreed.

?Drones servicing rural areas seems like a pretty simple solution to a big problem,? said Coun. Rosa.