



INFORMATION REPORT

TO:	Chair and Members Emergency & Community Services Committee
COMMITTEE DATE:	September 22, 2014
SUBJECT/REPORT NO:	Cardiac Safe City and CPR Training (CES14036) (City Wide)
WARD(S) AFFECTED:	City Wide
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SIGNATURE:	

Council Direction:

Community and Emergency Services Committee at its meeting on January 18, 2012 approved the following:

“Staff be directed to include in the Hamilton Emergency Services, Emergency Medical Services 2012, 2013, 2014 business plans, activities that promote an increase in the number of persons in the community trained to perform cardiopulmonary resuscitation (CPR) techniques”; “That staff be directed to report to the Emergency and Community Services Committee no less than once annually with respect to training members of the community to perform cardiopulmonary resuscitation techniques as well as the frequency of bystander cardiopulmonary resuscitation (CPR) in the setting of witnessed sudden cardiac arrest in the community.

Further to this, the Board of Health at its meeting on April 22, 2014 (14-003) approved the following:

“That the item on the Board of Health Outstanding Business List respecting ‘Cardiac Safe City’ (Item 6) be transferred to the Emergency and Community Services Committee”.

Information:

Purpose

The purpose of this report is to provide an update on the status of the Cardiac Safe City in relation to ongoing Cardiopulmonary Resuscitation (CPR) training and the placement of Automated External Defibrillators (AED's) within the City of Hamilton boundaries.

Background

35,000 to 45,000 thousand Canadians die from a Sudden Cardiac Arrest (SCA) each year. Nationally, about 5% of victims of an out of hospital sudden cardiac arrest survive through to discharge from hospital after treatment. Hamilton Paramedic Service responded to 777 requests for service relating to out of hospital sudden cardiac arrests in 2013.

Cardiopulmonary Resuscitation (CPR) is a first aid procedure for use in sudden cardiac arrest. The procedure includes compressing the victim's chest, often in combination with artificial respiration, to artificially re-establish blood flow to the brain, heart and other vital organs to a person that has suffered a SCA. CPR can be initiated by any bystander if they are trained in the procedure. It can also be performed under telephone guidance by the Ambulance Communications Officers (dispatchers) who follow a carefully scripted medical guideline to assist the callers.

Performance of CPR effectively "buys time" for the victim until the arrival of an Automated External Defibrillator (AED) or emergency services.

St. John Ambulance and the Canadian Red Cross of Hamilton currently train approximately 6,000 people in the performance of CPR per year in the City.

AEDs are a safe, easy to use electrical device that provides a "shock" to the patient's heart, in an attempt to restore the heart to its "natural" rhythm. The overall survival rate of all types of out of hospital sudden cardiac arrest victims in highly functioning emergency cardiac care response and treatment systems is unfortunately low. For some types of sudden cardiac arrest, such as those due to an electrical malfunction in the heart (ventricular fibrillation or ventricular tachycardia), where there are good circumstances including the combination of effective CPR, the use of an AED before emergency services arrival, a rapid ambulance response time, a high level of advanced care by the responding paramedics, and transportation to an appropriate receiving hospital, the survival rate can increase to as much as 60%. Survival of these patients declines about 7 to 10 percent for each passing minute without bystander CPR and early defibrillation,

Financial

Initial funding for AED devices and related client training has been provided by federal and provincial authorities and various non-profit agencies. Direct costs for the City associated with the implementation of AEDs and CPR training to date has been the allocation of staff to managing and development of the program and the replacement of consumable elements following use or based upon expiry dates.

In moving forward with the AED program, it is anticipated that no additional funding will be required during the next term of Council.

Report

During the past 6 years, a combination of federal, provincial and local Heart and Stroke initiatives totalling approximately \$550,000, have been instituted to train Hamilton residents in CPR and place AEDs in high risk buildings. These initiatives have led to over 2,500 people trained in CPR by paramedics and the placement of 127 AED's in city operated golf courses, recreation centres, arenas, libraries and administrative buildings. A further 171 AED's have been placed in private institutions, not for profit organizations and city schools.

Recent grants have led to the replacement of AED's in arenas, allowing for the repurposing of some older devices after refurbishment into schools and community complexes. Appendix "A" to Report CES14036 outlines the specific locations the AED's will be placed in September 2014. In moving forward, a strategy will be developed to determine a list of priority locations for AED's in the City, should additional AED's be made available for placement.

The efforts of all governments, organizations and individuals were recognized in the first quarter of 2014, when early bystander CPR and early defibrillation with AEDs were utilized successfully in the resuscitation of residents on two (2) separate occasions. Through continued expansion of CPR and AED familiarization with the public, the City of Hamilton will share in successes of an improved community response to sudden cardiac arrest.

During a recent review of all AED's located in the publicly operated facilities within the City of Hamilton, limitation was noted in identifying the location of AED's purchased by private organizations and/or citizens. For example, public spaces such as shopping malls, restaurants, and other complexes may have an AED available which is not identified within our database.

To improve our awareness of where these AED devices are located, and our ability to activate them early in the event of a potential sudden cardiac arrest at that location, the Hamilton Paramedic Service is evaluating the use of an AED registry. This AED registry is a web-based technology that would encourage registration of privately operated AED devices in an online database and assist with reminding the owners of the devices about required maintenance. This database can also be utilized by dispatcher's to identify the AED locations in close proximity to an emergency and advise the lay rescuer of its location.

This type of AED Registry is currently being utilized in a variety of areas with some success. Examples include the City of Saskatoon, Orange County Florida, and various municipalities in Minnesota.

Conclusion

Research has shown that the combination of early recognition of an emergency, early access to 911, early bystander CPR, early defibrillation using an AED, rapid ambulance

response, and a high level of qualified paramedic care increases the positive outcomes from sudden cardiac arrest dramatically. With continued support from the City of Hamilton, along with federal, provincial and local partners our goal is to continue to grow a Cardiac Safe City.

Hamilton Paramedic Service will be pursuing a strategy in the fall of 2014 to implement a public access defibrillator registry which would allow for awareness of the placement of both public and privately maintained AED's, and provide a linkage to the Ministry of Health Central Ambulance Communications Centre for reference during the dispatch call taking process.

APPENDICES AND SCHEDULES ATTACHED

Appendix A to Report CES14036: AED Deployment (Re-Purposed)