



Report To: DSB Program Planning Committee  
From: Michael Maclsaac, Chief of EMS  
Date: June 25, 2014  
Re: Public Access Defibrillation (PAD) Program - Issue Report

## **RECOMMENDATION**

That this report is an update to previously provided information, reaffirm our current situation, and recommend a future plan in regards to the Manitoulin-Sudbury DSB Public Access Defibrillation (PAD) Program.

## **REPORT**

### **Purpose**

The purpose of this report is to provide the DSB Program Planning Committee with an update on the PAD Program, maintenance requirements, program expansion and future projections.

### **Background**

In September of 2009, former Director of EMS Jeff Horseman presented a report entitled, "[2009 Public Access Defibrillation Program Evaluation & Recommendation Report](#)". This report detailed the Public Access Defibrillation (PAD) program and 3 possible directions to pursue. The DSB Board approved the following by resolution:

That the Manitoulin-Sudbury [DSB] supports the PAD program; That the [Chief of] EMS develop options to support this activity including initial training, recertification training, inventory control, and all other aspects of the program

In September 2010, current Chief of EMS, Michael Maclsaac, presented an [Update on the PAD Program](#) training and maintenance requirements. The conclusion of that Issue Report was to more effectively manage the current 76 Automatic External Defibrillators (AEDs) (projected to increase to 90 over several years) by:

- assigning the portfolio to the Commander of Training,
- utilizing the assistance of the DSB Ontario Works Trainer for CPR-AED education,
- increasing the equipment reserve to \$30,000, and
- absorbing the ongoing maintenance costs in the EMS Operating Budget.

That report was based on a seven-year lifespan of the AEDs.

## **Current Issues**

As of the Spring of 2014, we have 124 AEDs in our PAD program (located in buildings and public places throughout the DSB) plus another 17 AEDs purchased directly by the DSB (located in DSB owned buildings) and another 4 being utilized by our Emergency First Response Teams (EFRT). That amounts to a grand total of 145 units in our area.

The vendor from which the AEDs have been purchased has reported where previously the lifespan of the Zoll AED+ was 7 years, is now estimated to be 10 years or more thus reducing the impact on the Equipment Reserve (as our first units purchased are now not due for replacement until 2016). What now needs to be considered however is the effect of the increased AEDs to the EMS Operating Budget for miscellaneous AED supplies. The current number of AEDs in the PAD program combined with potential yearly increases (historically 10 new AEDs on average are added each year) will increase the Operating Budget proportionately (see Funding Parameters below).

With the ever-growing amount of AEDs it is also becoming cumbersome for the Commander of Training to provide the required initial training and manage the inventory. Additionally, although some recertification training has been provided by EMS and OW staff, we have not been meeting the needs of our community partners. As the number of AEDs increase, this too becomes more difficult.

Another current consideration is the most recent implementation of AEDs from a Federal AED replacement program where not only did they replace 11 AEDs in local arenas, they added another 8 AEDs to our compliment. This has resulted in having 11 AEDs returned to our inventory that are 7-8 years old and therefore have at least 2-3 years left on their life expectancy, with potentially more. These AEDs could be redeployed to our wait list of locations that do not meet the current restrictive criteria for receiving a funded AED. The drawback of this approach is that every AED added to the current compliment will increase the overall cost of maintenance and these particular units would need to be replaced in approximately 2-3 (or more) years. The good news is that both the Provincial and Federal Governments are now looking at providing funding for replacement programs instead of providing money for implementation programs.

The final issue is one of future potential sites that do not qualify for funding for AEDs. In the past, we had allowed a group of First Nations Health Clinics (5) to “buy into” the PAD program. They provided the funding to purchase the AED, initial supplies and initial training and they became part of the PAD program where the AEDs become registered with ambulance dispatch and the province and we monitor for quality assurance and ensure the equipment and supplies are maintained as required. This type of program assists those who do not meet the qualifications to receive units for free however they do receive the incentive of being part of our program with associated tracking and replacement supplies. As noted below you will see that the cost associated with maintenance of one AED through its lifespan is minimal (\$764 over 10 years) however when the number of units is factored in it becomes a more costly endeavour. We would like to offer this type of program to Municipalities or community groups that may wish to do the same.

## Funding Parameters

As previously mentioned there are maintenance and replacement costs for the AEDs within the PAD program. The following table presents the costs associated with one AED over a 10 year cycle. Again, please note the 10 year lifespan has been approved by our current vendor and the warranty on the units themselves is good for only 5 years.

	YEAR									
Funded Buy in	1	2	3	4	5	6	7	8	9	10
\$1600		\$121		\$121	\$280	\$121		\$121		

- Total maintenance costs over 10 years - \$764
- Total estimated replacement cost after 10 years - \$2,000
- Total estimated per AED costs after 10 years - \$2,764

According to the figures above, we would be required to place \$200.00 in the equipment reserve and \$76.40 in the operating budget for each AED, every year to ensure maintenance of the program. The following table presents the current status and projections in numbers of AEDs with associated costs.

Total # of AEDs	Budget	Estimated Yearly \$ Requirements	
2013 - 145	\$30,000	\$29,000	Equipment Reserve
	\$10,000	\$11,078	Operating Budget
2014 - 155	\$30,000	\$31,000	Equipment Reserve
	\$10,000	\$11,842	Operating Budget
2015 - 165	\$30,000	\$33,000	Equipment Reserve
	\$10,000	\$12,606	Operating Budget

As you will note from the above table, the current Equipment Reserve is close to the \$30,000 figure but the issue has now become the miscellaneous supplies and the Operating Budget.

Lastly, as mentioned above there are costs associated with ongoing training hours for each unit in circulation which amounts to 50 days per year, on average. Some of this cost is currently absorbed utilizing current Human Resources (EMS Staff and Ontario Works staff) to provide the training while on duty. However as more units get placed into the communities there will be more desire for training. Again we note that these AEDs are user friendly and require no real training to use, but we do get community interest in training just so people can feel comfortable about using the equipment. Depending on the continued wishes of each community site, there may be a view towards hiring additional “in-house” resources (such as training in-house trainers) or outside agencies to provide training where the current in-house resources are not feasible.

## **Recommendations**

Moving forward the EMS Department is recommending the continued support of the PAD Program as it stands with a few additions.

1. Redeployment of the excess AEDs made available by the recent Federal “arena” program. We will look to current wait list candidates who have little chance at future funded programs due to restrictive criteria. These 11 units have 3 years of life left and keeping them boxed up in storage is not going to help save a life. Training required for these new sites will be managed internally through current human resources.
2. The DSB will develop a policy outlining the requirements to participate in the PAD program. Included within will be consideration for allowing other organizations to “buy-in” to our PAD program. This gets non-traditional community locations involved and allows for a greater reach and more public knowledge in this life saving measure. Both of the aforementioned recommendations also allow for more CPR training to be delivered into our communities.
3. The EMS department will confirm the current financial implications as noted above and plan to add \$5000-\$7000 to the 2015 budget. It is anticipated that the impact for next year will be minimal with minimal increases for each year thereafter dependent on the future path of this program.
4. Continue to monitor the PAD Program to ensure that it is meeting the needs of the communities we serve.

## **Conclusion**

The PAD Program for Manitoulin-Sudbury DSB is an important lifesaving initiative in the communities we serve and is critical for the EMS Department when it comes to the first criteria of mandated EMS response times is considered (The percentage of times that a person equipped to provide any type of defibrillation has arrived on-scene to provide defibrillation to sudden cardiac arrest patients within six minutes of the time notice is received). Provincially, 6000 AEDs have been deployed and 64 citizen “saves” can be attributed to those units. Locally, we have had 2 uses of our AEDs, unfortunately with unsuccessful results. Additionally, it has to be noted that public CPR is also a great initiative that is able to save lives. Looking to the future we would envision the possible addition of Community Paramedicine led CPR clinics to assist on this front. Redeploying older but viable units and allowing other communities or groups to buy into the PAD Program are both feasible options that could contribute to future successful resuscitations.

Operating the current PAD Program is however not without its challenges. Maintenance of the PAD Program under the existing structure appears to be manageable at the current level but is becoming more difficult as the program grows and the Commander of Training position evolves. Looking to the future as more AED’s are deployed, the DSB may need to consider the addition of in-house certified trainers or the possible use

of outside training agencies. Continual review of the PAD program is essential to ensure that it remains manageable both financially and administratively.