



M E M O R A N D U M

TO: TEMS Paramedics, Managers, AOSSs, DOSSs, Supervisors, TEMS Education
FROM: Dr. R. Verbeek
RE: Configuration of Zoll E-series Defibrillator
Firefighter Use of Zoll AED-Pro
DATE: February 6, 2007

Configuration of Zoll E-series Defibrillator

The Zoll E-series Defibrillator will soon be introduced into TEMS ambulances in a rolling fashion. All TEMS paramedics have received training on the general use of this device and have practiced cardiac arrest scenarios. The following outlines details of the final configuration of the Zoll E-series defibrillator.

The Zoll E-series Defibrillator has been configured to facilitate all paramedics to perform CPR protocols that meet the 2005 cardiac arrest guidelines and current medical directives. Experience has shown that the best CPR protocols are done when the E-series is left in the AED mode at all times. All paramedics are encouraged to operate continuously in the AED mode.

Important aspects of the configuration of the Zoll E-series are as follows:

- 1) The upfront CPR interval is **pre-programmed** to be either 1 minute or 4 minutes and will be indicated by a tag attached to the defibrillator. Once CPR is started, continue chest compressions until the 1 minute or 4 minute mark on the timer is reached. This will be announced by the voice prompt, "PRESS ANALYZE".
- 2) All subsequent CPR intervals are auto-timed by the Zoll E-series to be 2 minutes. At the end of the 2 minute interval the E-series will **automatically** begin to perform a rhythm analysis, announced by the voice prompt, "STAND CLEAR". Chest compressions should not be done during the analysis.
- 3) If the rhythm is shockable, the E-series will **automatically** charge. Chest compressions should not be done while the E-series is charging.
- 4) A complete charge will be announced by the voice prompt, "PRESS TO SHOCK". The paramedic must press the SHOCK button to deliver a charge.
- 5) If the rhythm is not shockable, you will be prompted to restart CPR.
- 6) To avoid auto-analysis and auto-charging while moving the patient, the defibrillation pads should be disconnected where they are attached to the cable.
- 7) Once in the back of the ambulance, reconnect the defibrillation pads and press the analyze button to perform a final rhythm analysis.
- 8) To avoid any further auto-analysis and auto-charging during transport, turn the E-series off, then **immediately** back on (i.e. within 10 seconds). This will disarm the auto-analyze feature.

- 9) If you forget to turn off the E-series and inadvertent auto-analysis/auto-charging occurs, turn the E-series off, then **immediately** back on. This will disarm the auto-analyze feature and dump the shock. To restart the auto-analyze/auto-charge feature, press analyze at the appropriate time.

NB: If the Zoll E-series is operated in manual mode, no voice prompts will be given, CPR intervals will not be measured and auto-analyze will not occur. This usually results in less effective CPR protocols being performed.

Firefighter Use of Zoll AED-PRO



Deployment

- 1) Beginning in the next two weeks and until the end of April, Toronto Fire Service will deploy the new Zoll AED PRO on each of its fire apparatus. This will replace the current Laerdal Heartstart 3000.

Training

- 1) Concurrent with this deployment, all firefighters are being trained in the 2005 cardiac arrest CPR guidelines.

Switching Defibrillators

- 1) The proper time to switch defibrillators to the paramedic Zoll M-series or E-series is just before the beginning of an AED analysis. By this time your defibrillator should have been turned on, fully booted and ready to function.
- 2) The Zoll AED PRO has been configured to permit either 30 seconds or 3 minutes of upfront CPR. This will be indicated by a tag attached to the Zoll AED PRO. If required, all paramedics must allow the firefighter to complete either 30 seconds or 3 minutes of upfront CPR as indicated by this tag.

- 3) The Zoll AED PRO is outfitted with the new defibrillation pads that are combined with a sternally placed “hockey puck” accelerometer. All paramedics have been trained in the used of these pads. You **DO NOT** have to switch to your own defibrillation pads. As illustrated below, the female cable connector of the Zoll M-series or E-series fits into the male connector of the Zoll AED pads.



- 4) Continue chest compressions until the switch is complete then press **ANALYZE** immediately.

Note: The Zoll AED PRO pads cannot be used for cardiac pacing. If cardiac pacing is required, ACPs will have to switch to the pads currently used for this procedure.

(This document will be available on the SOCP website: www.socpc.ca.)