

POLICY NO: M - 012

POLICY: USE OF SEMI AUTOMATIC EXTERNAL DEFIBRILLATORS

ORIGINAL POLICY: OCTOBER 1997

LAST REVIEW DATE: OCTOBER 2002

REVIEW DATE: CURRENTLY UNDER REVIEW

1. INTRODUCTION

There is a considerable body of literature describing the benefits and risks associated with using Semi Automatic External Defibrillator in both clinical and non-clinical settings. The use of defibrillators in a clinical environment to treat patients in ventricular fibrillation and ventricular tachycardia has resulted in a significant reduction in mortality and an improvement in the long-term survival rates of the patients. However the picture is less clear when AEDs are used by first-responders outside of a clinical environment. The major reason for this variability appears to be that in many of the out-of-hospital cardiac arrest cases studied there were often lengthy delays in the initiation of basic life support and, in many cases, CPR was not commenced prior to defibrillation by emergency response workers. Not surprisingly, any such delay in administering CPR would have a negative impact on the survival rate of the patient. Even when basic life support was administered promptly by bystanders, a small number of out-of-hospital studies still showed no clear correlation between survival rates and the use of AEDs. These observations may raise questions about the quality of the life support offered by bystanders.

However, in circumstances where cardiac arrest patients are defibrillated immediately upon arrest, or prompt bystander CPR is followed with rapid defibrillation, the rate of survival is very good (43% to 90%). One would therefore anticipate that similar rates of survival could be achieved if AEDs, together with appropriately trained operators, were readily accessible in the workplace environment.

There appears to be little evidence to suggest that lay persons can not be trained to effectively and safely use AEDs in the workplace. However careful attention needs to be given to the design of appropriate courses and the maintenance of proficiency and standards by regular workshops. Based on material sourced for this study, these workshops would need to be held approximately every 6 months, but more frequent sessions may be deemed necessary depending on feedback from instructors and examiners. Problems associated with correct administration of CPR, either following AED analysis or between shocks, would need to be addressed through adequate training (this would presumably be less

of an issue with modern AEDs which provide a combination of synthesised voice and visual display instructions to operators).

Unfortunately, no studies were found discussing the efficacy of using AEDs in wet environments. Should support be given to use defibrillators in aquatic environments, careful consideration will need to be given to operational protocols to ensure the safety of patients, rescuers and bystanders.

Automated External Defibrillation is a proven technology now confirmed to have saved tens of thousands of lives. However, as with all medical interventions, perfection is not possible. Nevertheless, AEDs appear to be not as dangerous as having no defibrillator at all with the successful resuscitation of cardiac arrest patients dependent, at least in part, on the time to first defibrillation.

2. POLICY

The benefits of early defibrillation are now not in question.

Whilst the Society advocates the availability and use of Semi Automatic Defibrillators, the decision to purchase equipment is a decision for each body considering this issue.

The response time of Intensive Emergency Assistance is the key issue in making a decision about the provision of Semi Automatic Defibrillation equipment.

In any case, however, equipment should only be used by those persons who have successfully undertaken training in the use of Semi Automatic Defibrillators.