

Manitoba Health, Seniors and Active Living (MHSAL) supports reporting and learning from patient safety events. The focus of a patient safety review is to closely look at the health care system that surrounds and interacts with those giving and receiving care. The goal is to identify risks to patient safety and recommend the most effective ways to minimize risk and improve the delivery of healthcare.

Patient Safety Learning Advisory

Improperly Charged Defibrillator During Cardiac Arrest

Summary:

A person suffered a cardiac arrest in a public location. Emergency Medical Services (EMS) responded to the 911 call. During resuscitation, the EMS defibrillator stopped working.

An Automated External Defibrillator (AED) was available on site and used.

Resuscitation was successful. The client was transferred to a cardiac care unit and treated for anoxic brain injury.

Keywords: defibrillator failure

Type of Analysis: single event

Findings of the Review:

A bi-annual inspection of the defibrillator was completed earlier on the day of the event. The unit displayed a “replace battery” message during inspection. Testing may affect the charge of the defibrillator. Replacement batteries were not available at the time of inspection.

Following inspection, the defibrillator was plugged into its charging station within the ambulance. The breaker switch on the inverter in the ambulance was off; therefore, there was no AC power in the ambulance. This resulted in no power being provided to the charging station for the defibrillator stored inside the ambulance. This resulted in the defibrillator not being fully charged at the time of use.

System Learning:

Incorporate two safety checks into the EMS equipment checklist:

- Check that the inverter breaker switch is in the “on” position
- Check that the charging station is functioning/operational

Provide education for new and current staff about how to activate the inverter and charging station within the ambulance.

Develop a process to ensure that replacement batteries are available for use should the defibrillator battery fail.

Develop a process for ordering and tracking of defibrillator battery replacements.

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