

Guidelines for School Nurse

## **AUTOMATIC INTERNAL CARDIAC DEFIBRILLATOR (AICD)**

### **OVERVIEW**

Automatic Internal Cardiac Defibrillator is a small battery powered electrical device surgically implanted under the skin to monitor and treat heart rhythm disorders. When a dangerous heart rhythm is detected, the AICD automatically restores the heart rhythm by delivering a jolt of electricity (shock) directly to the heart muscle. The device also has a pacemaker capability and can pace the heart if the heart rate is too slow or too fast. It contains a system for recording when an abnormal rhythm occurs and when shocks are delivered. The AICD has two parts: electric generator and electrodes. The generator is powered by a lithium battery and capable of storing the heart's rhythm. The electrodes or leads are flexible insulated wires placed against the heart wall. A typical AICD weighs about 4 ounces, and measures about ½ inch thick by 2 inches wide.

Pacing therapy may feel like a flutter or palpitation in the chest. A shock may feel like a sudden painful kick in the chest that can lead to loss of consciousness.

### **INDICATIONS FOR THE USE OF AICD**

- Episode of sudden cardiac arrest or ventricular fibrillation
- After a heart attack and at high risk for sudden cardiac death
- Cardiomyopathy and individuals at high risk for heart failure
- Episode of ventricular tachycardia
- Prolonged QT syndrome
- Syncope of undetermined origin associated with heart failure

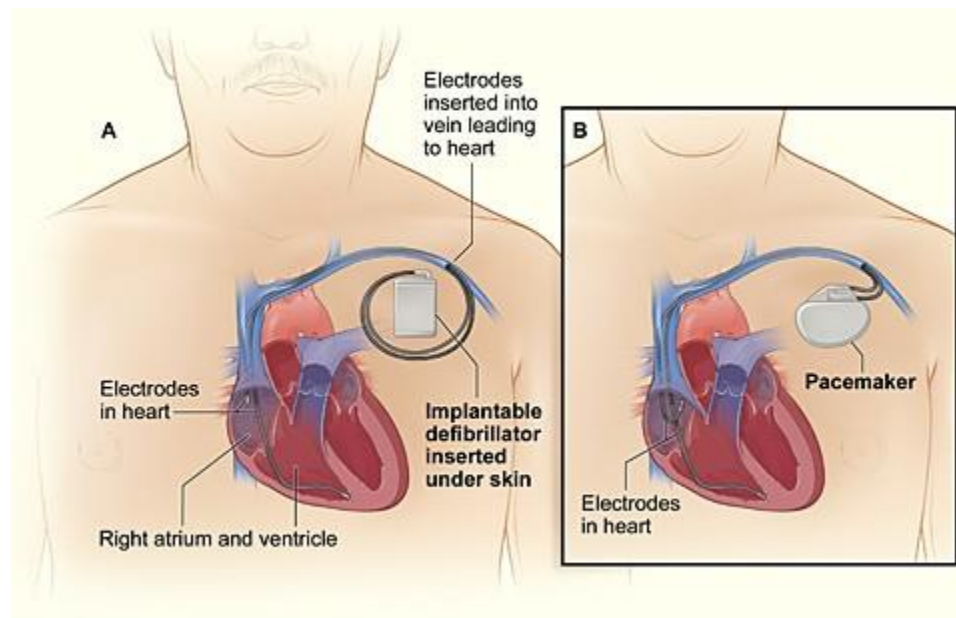
### **SPECIAL CONSIDERATIONS**

- All AICDs are well protected. Most machines and electrical devices are safe to use around a patient with an AICD. However, there are certain devices that generate, transmit and use electricity that interfere with the normal operation of the AICD. When there is signal interference, the AICD can fail to deliver therapy or receive extra therapy when it is not needed.  
**See manufacturer's guide for comprehensive list of electromagnetic compatibility.**
- Follow standard CPR and AED guidelines if student with AICD is found to be unresponsive or not breathing.

# AUTOMATIC INTERNAL CARDIAC DEFIBRILLATOR (AICD)

## SPECIAL CONSIDERATIONS (Continued)

- CPR rescuer will experience mild discomfort when AICD attempts to defibrillate during cardiac arrest. This will not cause any harm to CPR rescuer.
- External defibrillator pads should be kept at least 10 cm away from AICD.
- Avoid trauma/injury of the implant including contact sports.
- Cell phones may be used, but always have the student carry the cell phone on the opposite side from the device, at least six inches away.
- Hold or play iPods, MP3 players and wireless video games at least six inches away from the device.
- Avoid metal detectors and security magnetic wands. It is safe to walk through an electromagnetic anti-theft system.
- Selected school staff should be visually introduced to a student with AICD and made aware of their restrictions and special considerations.



## REFERENCE:

National Heart Lung and Blood Institute: Diseases and Conditions Index  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov) Implantable Cardioverter Defibrillator