

Specialized Medical Devices & Equipment

Unique Cardiac Defibrillators

Supersedes:

Effective: 06-01-16

With advances in medical technology, we are expecting to interact with unique cardiac defibrillators. Two recent examples are the Boston Scientific Subcutaneous Implantable Defibrillator and the Zoll LifeVest.

Subcutaneous Implantable Defibrillator

A new device and technique of subcutaneous implantable defibrillator (S-ICD) has been developed: EMBLEM-S-ICD by Boston Scientific. For more information:

<http://www.bostonscientific.com/en-US/products/defibrillators/emblem-s-icd-system/device-overview/implant-procedure.html>

The new S-ICD are unlike a standard implantable pacemaker-defibrillator. The standard implantable pacemaker-defibrillator is implanted in the left upper chest, similar to a standard pacemaker. In these new S-ICD, the battery/monitor is larger and implanted under the left lateral breast tissue. **If you encounter a patient in cardiac arrest, the manufacturer's recommendation is to place the lateral defibrillation pad in the posterior position. Avoid placing the pad directly over the battery pack.**

Zoll LifeVest

The LifeVest™ is an alternative to a standard implantable defibrillator. The device is worn externally, with skin contact. The device has several warning levels about impending defibrillation for the patient to respond to prior to delivery of a shock.

LIFEVEST® WEARABLE DEFIBRILLATOR EMERGENCY PATIENT MANAGEMENT

What alert sounds and voice prompts are being broadcast?

ALERT:

- Device Silent OR Gong Alert (SINGLE TONE)

VOICE:

- None — device silent
- "Contact physician"
- "Treatment has been given, call your doctor"

STATUS:

- Device is monitoring the patient
- Device may be alerting the patient to follow instructions on the screen

Proceed to
First Responder
Instructions
Below

ALERT:

- Siren Alert (TWO TONE)

VOICE:

- "If patient is not responsive, call for help, perform CPR"
- "Device disabled, call ambulance"

STATUS:

- Device cannot detect ECG or the device has delivered the maximum number of treatments

Proceed to
First Responder
Instructions
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ALERT:

- Siren Alert (TWO TONE)

VOICE:

- "Press response buttons to delay treatment"
- "Electrical shock possible, DO NOT TOUCH PATIENT"
- "Bystanders do not interfere"

STATUS:

- Device has detected a ventricular arrhythmia
- Device is preparing to treat the patient
- Shock likely
- Stop CPR
- Only the patient should press the response buttons (patient consciousness test)
- Do not touch patient
- Allow device to treat the patient

When siren alert stops or "If patient is not responsive, call for help, perform CPR" is broadcast:

Proceed to
First Responder
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First Responder Instructions

- Proceed with standard evaluation and treatment measures.
- CPR can be performed as long as the device is not broadcasting "press the response buttons," "electrical shock possible, do not touch patient," or "bystanders do not interfere."
- If external defibrillation is available, a decision can be made to remove the LifeVest and monitor/treat the patient with the external equipment.
- To remove the LifeVest, first pull out the battery, then remove the garment from the patient.