HWD Hospital Wearable Defibrillator

ZOLL®

A MINUTE MATTERS

Timely response is important for all victims of cardiac arrest. For patients at risk of VT/VF, a Minute Matters.

Patients who have underlying cardiac disease and are in the hospital for diagnosis, treatment, post-event management, or interventional procedures are at risk of VT/VF. Immediate treatment can mean the difference between neurologically intact survival or something less.

Most of these at-risk patients can be identified; they include those with Class III and IV heart failure, STEMI and NSTEMI patients, and others at risk of arrhythmia. Today, these patients are generally managed in the cardiac care unit or other telemetry units. Outside these areas, timely response is more difficult.

According to the American Heart Association Get With The Guidelines® registry, member hospitals have achieved a 35% survival rate among patients in VT/VF[1].

Although some hospitals have shown impressive results, **we can still do better.**

WHEN A MINUTE MATTERS

Chan and colleagues writing in *The New England Journal of Medicine* compared data on shockable rhythms and found that when response time exceeded two minutes, survival dropped significantly.[2] In fact, survival drops 10% for every minute shock delivery is delayed.[3]

This is not a matter of poor performance; it is the nature of the arrest and our physical ability to respond immediately, given traditional detection and response systems. But now there's another option: the Hospital Wearable Defibrillator (HWD).

SUCCESS OF WEARABLE DEFIBRILLATORS

The HWD utilizes the same detection algorithm and defibrillation waveform as the LifeVest® Wearable Defibrillator. Patients wearing the LifeVest have a 98% first shock success rate[4,5,6] and 92% event survival rate.[7,8] A key reason - timely defibrillation. Most patients are shocked within 1 minute. When the heart can be returned quickly to a perfusing rhythm, long-term complications can be minimized.[2]

This type of care is available to at-risk patients in the hospital with the **HWD Continuous Protection System.**

HWD MONITOR

Main unit of the HWD system. Monitors patient's heart rhythm and delivers defibrillating treatment.

AUTOMATIC DETECTION, IMMEDIATE TREATMENT

For a patient in cardiac arrest, any delay in defibrillation means that the likelihood of dying or surviving with complications increases. Automatic detection and treatment streamline a critical factor to surviving the arrest in these patients – the HWD is designed to automatically treat within 60 seconds..

The HWD helps the care team manage at-risk patients by:

- detecting VT and VF
- delivering patient consciousness test (response button use)
- defibrillating immediately

HWD CONTINUOUS PROTECTION SYSTEM

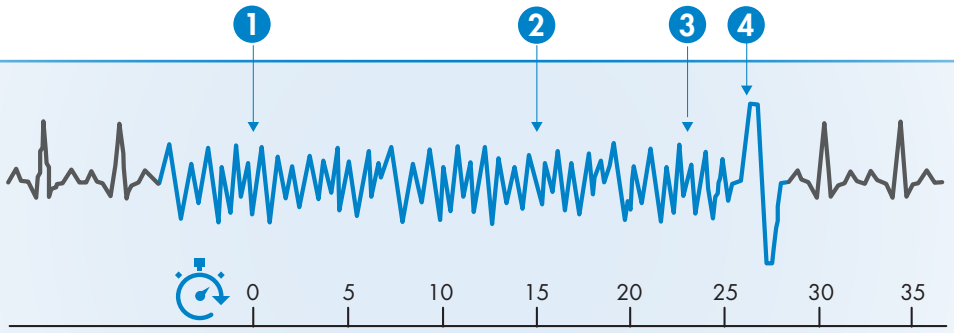
- Continuous protection through constant ECG monitoring and automatic defibrillation
- Designed to treat within 60 seconds
- Adhesive defibrillation and ECG electrodes
- Messages designed specifically for patients and for nurses
- Protection anytime, day or night in the hospital

HWD TREATMENT TIMELINE

The HWD is designed to deliver treatment during ventricular fibrillation as follows:

1. Arrhythmia detected; siren alert activated
2. Patient audible prompt: "Press response buttons"
3. Bystander audible prompt: "Bystanders, do not interfere"
4. Treatment delivered

HWD Continuous Protection System



BENEFITS OF THE HWD

MANAGES RISK

Continuously protecting these patients with the HWD helps you and your team mitigate your risk against undetected ventricular arrhythmias and delayed treatment.

EXTRA PROTECTION

The HWD equips hospitals with a means to reliably provide defibrillation automatically for patients identified as at-risk. It complements but does not replace the toolkit that the care team already has in place for responding to cardiac arrest.

PEACE OF MIND

The HWD may ease the patient's mind when he or she is given the HWD as a complement to the resuscitation protocol. The HWD could also provide peace of mind for the care team. Knowing that their patients at risk of VT/VF are fully protected is reassuring. Protection is provided anytime, day or night in the hospital.

THE HWD: BECAUSE A MINUTE MATTERS.

The HWD is indicated for patients 18 years of age and older in a medically supervised environment who are at risk of sudden cardiac arrest and are not candidates for or refuse an implantable defibrillator. The HWD is contraindicated for use on patients with an active implantable defibrillator.

[1] Peberdy MA et al. *Resuscitation*. 2003;58(3):297–308.
[2] Chan PS, et al. *NEJM*. 2008;358:9-17.
[3] Cummins RO. *Annals Emerg Med*. 1989;18(12):1269-75.
[4] Chung MK, et al. *J Am Coll Cardiol*. 2010;56(3):194–203.
[5] Klein HU, et al. *Pacing Clin Electrophysiol*. 2010;33:353–367.
[6] Kutyifa V, et al. *Circulation* 2015;132(17):1613–1619.
[7] Epstein AE, et al. *J Am Coll Cardiol*. 2013;62(21):2000–2007.
[8] Waessnig N, et al. *Circulation* 016;134:635–643.

ZOLL MEDICAL CORPORATION

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