

# Don't be annoyed! There are solutions to alarm fatigue in hospitals

BY VICKI FORDE

We've all been to hospitals and heard the constant sounds of beeps and tones – which hospital nurses hear all day long. Ventilators, infusion pumps and blood pressure monitors are just some of the several hundred alarms per patient per day, which are causing alarm fatigue.

These are the beeps, rings and tones that come from different monitors and devices attached to patients. The alarms may be real or false, but these life critical alarms cannot be ignored.

Over time, hospital caregivers become desensitized and overwhelmed by the noises – a dangerous situation, as a patient's life could be at risk.

In the United States, The Joint Commission, which accredits U.S. hospitals and other healthcare organizations, has issued a sentinel event alert to hospitals about the need to reduce “alarm fatigue” related to alarms set off by monitoring devices. This term refers to situations in which clinicians ignore or turn off the alarms that they find irrelevant or annoying.

Factors that contribute to alarm-related sentinel events include:

- Alarm fatigue – the most common contributing factor
- Alarm settings that are not customized to the individual patient or patient population
- Inadequate staff training on the proper use and functioning of the equipment
- Inadequate staffing to support or respond to alarm signals
- Alarm conditions and settings that are not integrated with other medical devices
- Equipment malfunctions and failures

Since 2007, ECRI Institute has reported on the dangers related to alarm systems. In its annually published “Top 10 Health Technology Hazards” list, clinical alarm conditions consistently appear as the first or second most critical hazard, reflecting both the frequency and serious consequences of alarm-related problems.

In addition, the U.S. Food and Drug Administration's (FDA) Manufacturer and User Facility Device Experience (MAUDE) database reveals that 566 alarm-related patient deaths were reported between January 2005 and June 2010, a figure that is considered by industry experts to under-represent the actual number of incidents.

Alarm fatigue also occurs when a true life-threatening event is lost in a cacophony of noise because of the multitude of devices with competing alarm signals, all trying to capture someone's attention, without clarity around what that someone is supposed to do. It is compounded by inconsistent alarm system functions (alerting, providing information, suggesting action, directing action, or taking action) or inconsistent alarm system characteristics (information provided, integration, degree of processing, prioritization).

Patients also experience alarm fatigue, as they are unable to rest with the multitude of alarm tones going off within their room.

Direct messaging and calls to staff have practically eliminated the need for overhead paging and noise. Implementing a quiet, healing environment has proven to

result in healthier and happier patients.

Alarm fatigue is a system failure that results from technology driving processes rather than processes driving technology. Austco Communication Systems, a worldwide provider of IP Nurse Call Solutions, uses mobile communication to

eliminate the need for alarms to be broadcasted throughout the hospital floor or unit.

For example, when a patient presses the nurse call button for assistance, a notification is automatically sent to the assigned nurse/caregiver's mobile device. The noti-

fication includes the call location and type of call allowing staff to respond to the call quickly and efficiently.

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