

Quiet Please: Noise Levels and Alarms on Nursing Units Affects Patients and Staff

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Introduction

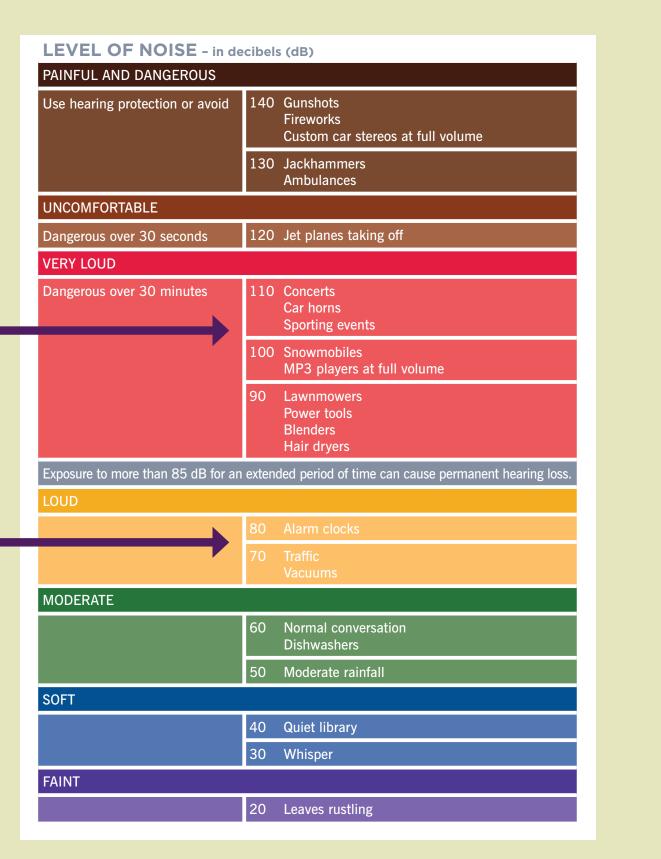
- Alarm fatigue puts patients at serious risk. Preset devices or default settings can cause problems because the device may sound off as a warning without action.
- Noise in hospitals can be detrimental to patients' health and healing. The World Health Organization (WHO) states that hospital noise levels should not exceed 45dB during the day and 35dB at night. However, during shift change, noise can be as high as 113dB and bedside alarms sound off at 79dB, well above the standard set by the WHO.

Objectives

- Illustrate alarm fatigue and management are important safety issues.
- Describe the effects of noise on patients and staff.
- Demonstrate cost-effective ways to combat noise in hospitals.
- Highlight ways to reduce false alarms.

Decibel Chart of Common Sounds

- Noise on the nursing
 unit may be as high as
 113dB during shift change.
- Bedside alarms have been monitored at 79dB.



Noise Can Cause Physiological and Psychological Damage to Patients

- Increased respiratory rates
- Elevated blood pressure
- Increased stress and anxiety
- Delayed wound healing
- Altered immune function
- Altered sleep patterns



Results of Increased Noise on Staff

- Elevated heart rate
- Increased agitation
- Decreased patient and family satisfaction
- Higher stress level
- Professional burnout
- Perceived higher work demands
- Increase in errors in judgment and critical thinking

Steps to Reduce Noise

- Test the acoustics to reduce environmental noise on the unit.
- Implement an alarm configuration policy.
- Change the default settings of alarms.
- Purchase equipment based on function, price and auditory impact.
- Listen to patient satisfaction feedback.

Alarm Safety and Noise Reduction Matters

- Alarm safety is a 2014
 The Joint Commission patient safety goal.
- Noise reduction improve communication.
- Noise reduction increases patient satisfaction.
- Noise reduction increases patient safety.
- Noise reduction increases staff satisfaction.

Recommendations for Alarms

- Eliminate unnecessary monitoring.
- Change electrodes daily to decrease false alarms.
- Establish guidelines for alarm settings including limits and defaults.
- Ensure a process for safe alarm monitoring and response.
- Set alarm limits for individual patients.
- Maintain alarm-equipped medical devices to decrease false alarms.
- Reduce nuisance alarms.

Other Strategies for Noise Control

- Lower volumes of clinical equipment.
- Oil wheels and maintain equipment.
- Reduce overhead paging by using beepers or phones.
- Refrain from congregating outside patients' doors or at the nurses' station.
- Post signs to remind staff and families to keep the noise down.
- Install acoustic tiles in halls and at the nurses' station.
- Encourage patients to use headphones when watching television.

Conclusion

- Creating a culture of quiet takes an interdisciplinary approach. Every department can contribute to a safer, quieter environment.
- Encourage the placement of signs to remind staff and families that silent hospitals help healing.
- Florence Nightingale defines noise as "that which damages the patient." Further stating, "Unnecessary noise is the cruelest absence of care."

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