

# Auditory Noise and the Impact on Patient Experience

While healthcare environments continue to improve, striving to provide better patient outcomes and experiences, current hospital environments remain extremely noisy. So much so that the noise levels within hospitals have become a risk factor. In October 2011, the first Medical Device Alarm Fatigue Summit was held in Washington, DC to address this very topic.

In fact, noise levels in most hospitals far exceed recommended guidelines, according to research published by Anjali Joseph, Ph.D.; and Roger Ulrich, Ph.D published for The Center for Health Design, *Sound Control for Improved Outcomes in Healthcare Settings*.

The study determined that sound can have a positive or negative impact on patients, staff, and visitors in hospitals – the manifestations of sound can range from soothing and therapeutic to stressful and disturbing. For patients, high noise levels can have serious consequences ranging from sleep loss and aggravation to elevated blood pressure.

Beyond the poor physical outcomes, other compromises may occur due to poorly designed acoustical environments. Patient confidentiality may be seriously compromised if a private conversation between staff or staff and a patient is overheard by unintended listeners. Also, a poor acoustical environment can compromise communication between patients and staff and between staff by making speech and auditory signals less heard or noticeable. All of these potential situations, have the ability to compromise patient safety and impact patient outcomes.

Research reviewed by Joseph and Ulrich indicates that patients were more satisfied with the care provided by the staff under good acoustic conditions. And most importantly, the incidence of re-hospitalization was higher among patients treated under bad acoustic conditions. The bottom-line: the better acoustic the conditions, the more improved the outcomes.

The study by Josephy and Ulrich provides environmental design strategies that can be implemented to improve the auditory environment, including:

- Single patient rooms enclosed with walls from floor-to-ceiling
- High-performance, sound-absorbing acoustical ceiling tiles and other interior finishes
- Removing or replacing loud noise sources on hospital units, such as medical carts as well as paging and alarm systems
- Adding music therapy

In addition, a white paper written by Susan E. Mazer, MA, *Hospital Noise and the Patient Experience: Seven Ways to Create and Maintain a Quieter Environment*, provides ways to improve the auditory environment at the bedside.

1. Get everyone involved. Establish a sound committee.
2. Assess the Sound Environment. How noisy is it?
3. Establish Sound Standards.
4. Establish Equipment Maintenance and Purchasing Standards
5. Be the Patient Advocate: Make decisions about patient-appropriate equipment
6. Educate Staff: Model sound-sensitive behavior
7. Measure Results

As with anything, it takes recognizing there is a problem first to begin addressing it. Assessing the situation as Mazer suggests is a great first step. And, even the best environments always have a bit of room for improvement – that’s what makes them great. Beyond that, realize that patients won’t be the only ones to benefit from a better auditory environment, the staff will as well. The study by Joseph and Ulrich also examines those benefits, *Sound Control for Improved Outcomes in Healthcare Settings*.

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