

Reducing Hospital Noise Levels: Happier, Healthier Patients



ARTICLE

Hospital noise levels are one of the most common patient complaints. Noisy hospitals lead to disrupted sleep, slower recovery time, and diminished patient satisfaction. The World Health Organization recommends that average patient room noise levels remain only slightly louder than a whisper. However, the average noise level in an American hospital often exceeds 50 decibels and peaks at around 90 decibels, which is extremely harmful to patient recovery and satisfaction (1). Even small reductions in the amount of noise, by investing in new equipment and technology, can make a big difference.

Negative Effects on Health and Healing

Various research studies conducted highlight the negative impact of noise on hospital patients. High noise levels lead to sleep deprivation, awakening, decreased oxygen saturation, high blood pressure, increased heart rates, and slower wound healing. Lack of sleep due to noise, also impacts other important health measures and outcomes such as weight gain, heart disease, stress levels, and inflammation (2). Noise has also been tied to a higher rate of rehospitalization.

Patient Satisfaction & Reimbursement

Not only does noise play a major role in health and healing, it also plays a role in patient satisfaction. The HCAHPS Survey is administered to a random sample of patients throughout the year to measure the patient perspective on hospital care. One of the questions specifically addresses the quietness of the hospital environment. Hospital noise continues to rank low on the national HCAHPS Survey.

On average, only 50% of patients feel that their room is quiet enough at night. These survey scores effect government reimbursements. Poor scores will cost the hospital money. Data shows that patients who were dissatisfied with noise levels in their rooms were significantly less satisfied with their overall hospital experience, which further impacts hospital reimbursement. Noise is a large contributing factor to patient satisfaction. Massachusetts General Hospital shared the following patient comment from their HCAHPS Survey responses from December 2011 – January 2012 (3).

“The noise at night was intolerable. Alarms were going off constantly and appeared to be ignored, alarms from other rooms. It was impossible to sleep at all.”

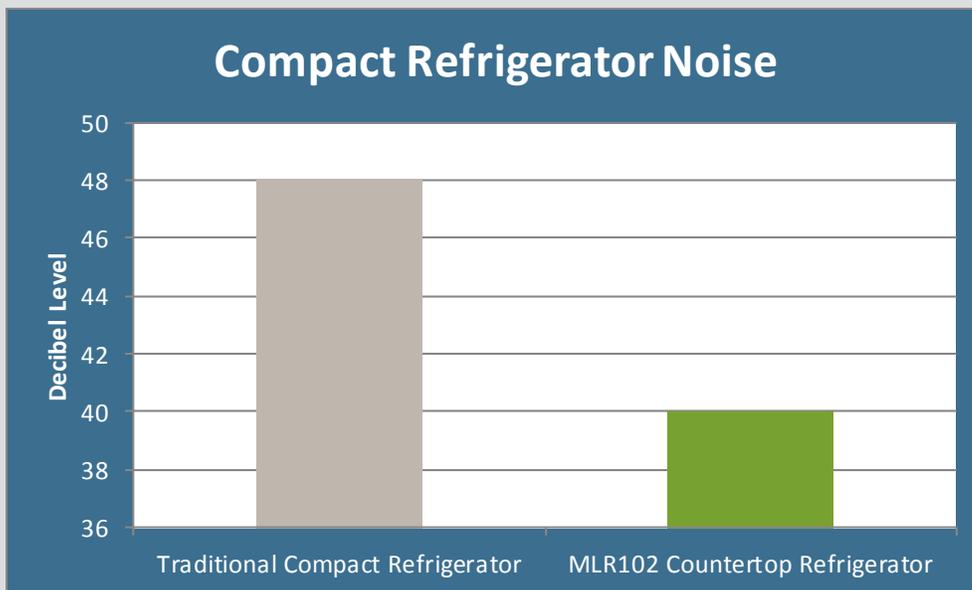
Steps for Reducing Noise

Patients are letting hospitals know that noise is a major issue. There are many ways hospitals can reduce noise levels for patients such as designating quiet hours, turning down lights, minimizing conversations at nursing stations and other areas close to the patient, designating phone call areas, optimizing clinical interventions (vital signs, blood draws, etc.), investing in quieter equipment, and moving rounds to outside of the quiet hours. In order to implement these improvements, there needs to be high-level buy-in and continuous improvement processes in place to ensure the program is creating a quieter atmosphere for patients.

Choosing Quiet Equipment

We have optimized our new point of care, medical-grade refrigerator for patient satisfaction and recovery. The MLR102 is designed for installation in sound-sensitive locations, including patient rooms. It takes noise out of the equation, operating under 40 decibels, thanks to AdvanceCore™ cooling technology, meaning patients and care givers are never disrupted by the refrigerator.

The Helmer Scientific MLR102 provides superior temperature uniformity for the safe and secure storage of valuable medications near the bedside while limiting noise compared to traditional compact medical-grade refrigerators. We evaluated a traditional common compact medical-grade refrigerator to the Helmer Scientific MLR102 countertop refrigerator. As part of this evaluation both units were tested in a room with low ambient noise. Sound measurements were recorded with a 3M sound meter (Model SM004). Baseline ambient room sound levels were recorded, followed by sound readings taken after unit power-on (during pull-down to set temperature), and after the unit reached the set temperature. Average sound generated by the refrigerators was calculated using baseline ambient room sound levels. The results of this evaluation demonstrated that the MLR102 countertop refrigerator generated less noise than the traditional compact refrigerator (4). The comparison of the two evaluation units is shown below:



Conclusion

Hospitals across the country know that noise is negatively effecting patient satisfaction and recovery. Many organizations are putting plans in place to enhance their care environment by lowering noise levels. Choosing equipment which does not contribute to the noisy hospital environment is one step in the right direction for increasing patient satisfaction, speeding up recovery times, and helping patients rest and heal. Studies show that dropping noise levels by simply 5 decibels is extremely noticeable to the human ear. An evaluation of the Helmer Scientific MLR102 Countertop Refrigerator demonstrated that this unit is quieter than a tradition compact refrigerator.

1. "High Hospital Noise Levels Lead to Slower Patient Recovery." - The Advisory Board Daily Briefing. Advisory, n.d. Web. 08 July 2016.

2. "Quiet Design: Hospital Experiments with Sound Panels to Reduce Noise | University of Michigan News." Quiet Design: Hospital Experiments with Sound Panels to Reduce Noise | University of Michigan News. N.p., n.d. Web. 08 July 2016.

3. theberylinstitute.org. The Hospital Noise Project: Lessons on Addressing Noise from 241 U.S. Hospitals (n.d.); n. pag. Web.

4. Data on file. Helmer Scientific 2016.