

# Noise and Its Effect on Patients



Ever walked through a quiet hospital? Didn't think so. I don't think many exist. Obviously, hospitals want to be busy and serve as many patients as possible, which can lead to elevated noise levels, but the noise caused by a full census can in turn diminish the healing and convalescing taking place. This has long been posited as fact but now there is definitive proof: both patients and staff do better in quiet settings.

"At hospitals that cut noise levels, Dr. Roger Ulrich found, patients slept better, had lower blood pressure, were less likely to be rehospitalized and were more satisfied with their care. Similarly, staff reported improved sleep quality and felt better about their jobs."

Look at some of these noise measurements:

"A portable X-ray machine typically measures in at 90 dB, says Ulrich. Many alarms are in the range of 85 to 90 dB. Paging systems range from 75 to 80 dB. A nursing team studying noise levels at the Mayo Clinic-affiliated Saint Mary's Hospital in Rochester, Minn., measured a nighttime peak of 113 dB during a shift change in a large surgical care unit."

113 dB during a shift change! That's like a rock concert. And at night too! How can someone be expected to get the rest they need to heal if the equivalent of ACDC is shaking them all night long.

So what to do? Obviously a hospital can't stop using x-ray machines or not report to an incoming nurse during a shift change. One possible solution may be an increase in the amount of private rooms. I can imagine the only thing worse than being woken up at 3am is being woken up at 3am because of some stranger in the bed next to you. The increase in patient satisfaction should be well worth the expense of eliminating roommates.

Another way is to simply make noise elimination a priority. High performance acoustical ceiling tiles can dramatically reduce noise levels, as can sound absorbing (and cleanable) carpet. A sound masking system that raises ambient background noise levels can also be effective if hard, echo chamber-esque surfaces cannot be replaced. Even pager announcements over the loudspeaker can be replaced by vibrating beepers.

There are many ways to turn down the volume without affecting the quality of care – in fact, eliminating noise will *improve* care. Can you think of any other ways to reduce noise in a crowded healthcare setting?

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