Sound Diagnosis
A Prescription for Wellness, Privacy, and Improved Staff Function at Medical Facilities
Noise

• It’s been the No. 1 complaint of hospital and doctor’s office patients.
• It’s responsible for thousands of dollars worth of charting and billing errors each year.
• It’s caused distractions amounting to at least 2 hours of lost work time per employee per day.

As an industry concerned with wellness and healing, we should not overlook those environmental factors we can control.

And more.
Not only does noise distract an overworked staff, contributing to medical or administrative errors, but it is now believed to detract from the actual healing process. Noise can be one of the most invasive aspects of a medical facility environment.

The sound of discomfort or private medical discussions overheard through thin walls or curtains impacts patients and their families. To the innocent bystander, what is heard and overheard becomes magnified as an environmental stressor, often creating apprehension or anxiety. Anxiety is also shared by staff members, interrupted throughout the day by a myriad of office noise distractions.

The Sound Environment

A 2005 study by Johns Hopkins University in Baltimore¹ found out how sound levels increased in hospitals worldwide.

• Average daytime hospital sound levels had risen from 57 decibels to 72.
• Night-time levels had gone up from 42 decibels to 60.

These sound levels have continued to climb every year since then.

Another study² assess the noise levels in different environments of a hospital, showing high levels of noise way past the World Health Organization recommended maximum noise level of 40 dB.
New technology in local clinics and doctors’ offices, coupled with an increased patient load, means all facilities suffer from sound overload. Both casual and official conversations among patients, staff, and visitors, as well as the sounds of phones, doors, filing cabinets, and office machines, create a poor sound environment for the typical medical office or facility.

The accumulation of noise and conversational distractions significantly contributes to a negative healthcare experience and a negative work experience.

Background noises heighten the sense of sound as the body goes on the defensive, making it difficult to create a healing environment. Patients are less likely to communicate openly with doctors or staff if there is the risk of being overheard or insecurity about confidentiality.

Patients are at increased risk of medical errors and staff are suffering greater stress because medical facilities and hospitals have become noisier.

Higher noise levels can also cause stress among healthcare workers. Frequent distractions affect performance consistency and increase administrative error. Elevated noise levels make it difficult to hear conversations between healthcare providers and staff, increasing the risk of minor or even serious medical errors.
The High Cost of Distraction

A report published in the Applied Nursing Research Journal documented error rates by nurses in a hospital setting. The University of Pennsylvania School of Nursing studied the nature and prevalence of errors by hospital staff nurses in 2005. During a 28-day period, 393 registered nurses kept a detailed journal of their errors and prevented errors (referred to as near-errors).

- At least 30% of the nurses reported at least one error during the 28-day period, and 33% reported a near-error.
- Although the majority of errors and near-errors were medication-related, the nurses also reported a number of procedural, transcription and charting errors.

Some reports suggest that a nurse may be interrupted an average of 19 times during a 3-hour period by at least 13 different types of sources. Distractions and interruptions are among the causes of errors among nurses.

The quality of patient care calls for immediate action to improve the sound environment in medical facilities. Improving workplace conditions for healthcare staff members also pays dividends in terms of employee satisfaction and turnover.

Healthcare professionals operating in consistent low-level noise environments can suffer from higher levels of stress and have lower task motivation than workers operating in quieter or more focused environments. A 2001 research study by a Cornell University environmental psychologist reported that workers in such environments made 40 percent fewer attempts to solve unsolvable puzzles and made only half as many ergonometric adjustments to their workstations as colleagues working in quieter environments. University of Sydney research in 2013 found sound privacy as the worst frustration for office employees in open and closed offices.
...even low-level noise has modest adverse affects on psychological stress and motivation...

Under stress, workers in noisy offices tend to focus on the task at hand, leading to less flexibility when it comes to decision making and considering alternative courses of action. Stressed, distracted and unproductive workers experience higher rates of absenteeism and turnover than more productive and less stressed colleagues.

In today’s economy, distraction in the administrative arena literally costs the healthcare industry millions of dollars in lost revenue.

Clerical errors associated with charting and medical billing are on the rise, as non-standard pricing codes and insurance documentation requirements are more complex than ever.

One slip of a keystroke by a billing clerk can dramatically alter the tally. Add to that the actual cost of lost man hours and occasional legal bills associated with rectifying a problem, and we have an even greater sense of urgency when it comes to reducing noise distractions in medical facilities and offices.
Medical Privacy: It’s Not Just a Good Idea – It’s the Law

With the Health Insurance Portability and Accountability Act (HIPAA), all individually identifiable health information—electronic, on paper, or oral—must be kept private. Hospitals, doctors’ offices, claims offices, and anyone handling individual medical information must use reasonable measures to safeguard this information to avoid violation of the law.

As a result of the oral section of the regulations, healthcare facility managers must pay particular attention to speech privacy. From telephone conversations, discussions between doctors and patients, even registering for procedures or discussing payment terms must be conducted in a secured environment where there is no chance of being overheard.

Most elements of speech privacy involve facility/workspace design and the actual materials used in construction. Because of this, health facility managers hesitate to pursue active strategies to improve the sound environment due to cost concerns.

Recent advances in sound masking technology and acoustic panels have brought affordable alternatives to the marketplace. Healthcare facilities and doctors’ offices can now address issues involving the sound environment in a proactive manner.

The attainment of confidential speech privacy is the goal.
Improving the Sound Environment

Health facility managers can take the following measures to assess and improve the sound environment:

1. **Assess the Sound Environment.** Find a way to measure how loud is “loud.” Using a digital decibel meter, visit specific areas of the facility at different times of the day and record the types and levels of noise. Include functional noise created by equipment, doors, paging systems and other technology sources. Also look at the perceived noise level by staff and patients using a simple questionnaire.

2. **Relocate Noisy Machinery.** Change various work areas to relocate noisy and unnecessary equipment. Group office machinery and support equipment in separate areas away from patients and places where staff and patients interact—that will reduce the tendency to speak “above” the noise.

3. **Design Areas for Sound Control.** In existing open work areas, controlled background sound is needed to override the sound of speech and preserve conversational privacy without being obtrusive. This is called “sound masking.” When an electronically-generated masking system is used properly, unwanted sound distractions, such as voice conversations go unnoticed.

Aside from sound masking, acoustic panels also help improve both the acoustic and visual design of a workplace. It can be installed in lobbies, reception areas, stations, etc. as additional pieces of art. These panels help absorb and block distracting sound and improve the acoustic environment in healthcare facilities, providing a more appealing and comfortable environment for clients and employees.

Sound masking and acoustic panels should be a vital part of all open area design in healthcare facilities.

4. **Educate Your Staff.** Although monitoring staff behavior can be the least effective method of managing noise, standards should be in place to achieve and maintain an appropriate sound environment. This includes policies that govern private or confidential discussions taking place in public areas; use and methods of paging; and use of phones and call systems.
Prescription: Better Acoustic Management

Healthcare facilities and hospitals can improve patient wellness and staff function, ensure patient confidentiality, and save thousands of dollars each year by actively addressing their acoustic environment.

Proactive acoustic management through sound masking and acoustic panels is a cost-effective way to improve patient outcomes, increase staff productivity and affect your bottom line.

Since every health facility layout and function is different, specialized technicians can assess and design custom masking solutions to accommodate any configuration or budget. To determine how your healthcare facility or medical office would benefit from speech privacy, sound masking and acoustic panels, contact an acoustic system representative at:

**MPS™ LLC**

Toll Free: 866-557-8438
MakingPrivacySimple.com

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6 Kim, de Dear, Workspace satisfaction: The privacy-communication trade-off in open-plan offices, Journal of Environmental Psychology vol. 36 p.18-26, 2013