When noise is a problem:
Solutions to turn down the volume

Most of us take the noise around us for granted. Even so, it shouldn’t surprise us that unwanted sound can be the cause, not only of annoyance, but of aggression, hypertension, high stress levels, hearing loss, increased confusion, depression, and sleep disturbance, even falls, among other physical symptoms.

Not only can noise intrude on our peace and quiet, it can get in the way of everyday communication, by blocking, distorting or changing what we are trying to hear. For the person with Alzheimer’s, these problems with noise can be magnified because of the person’s loss of the ability to understand or distinguish among sounds in the environment. As Al Power, M.D., notes:

Competing sounds in the environment can lead to difficulty in focusing one’s thoughts or attending to conversation. Beyond the sounds that are considered “intrusive,” it is also important to look at our conversation. What is the tone of our voices? Do we sound relaxed, positive, warm and engaging? Or do we sound harried, stressed, angry or abrupt? As one’s ability to process the details of language becomes challenged, the tone of the voices in the environment creates a stronger effect than the actual content of the comments.”

The impact of noise

Recently, staff and residents at Isabella Geriatric Center in northern Manhattan were holding a meeting in one of their community rooms and realized they had to stop the meeting periodically because the ice machine also located in the room was so loud they couldn’t hear each other over the sound of the machine.

To seek solutions to this and other noise problems, Isabella created two “Noise” workgroups. One workgroup decided to look at the noises made by machines and equipment, and the other workgroup decided to concentrate on noise created by people (such as calling out or moaning by residents in distress, or the hubbub of staff when shifts change). Isabella’s approach to problem-solving is to involve as many perspectives as possible on their workgroups. These two groups had Nursing Assistants, family members, Security, Housekeeping and Finance represented, among others.

The “Mechanical Noise” workgroup started by finding out everything they could about the impact noise was having on residents and staff. One of the things they learned right away is that the federal Environmental Protection Agency suggests a decibel level be no higher than approximately 32 decibels for a good night’s sleep. However, most medical equipment emits between 40 to 65 decibels.

Sources of noise include call bell systems, tube feeding pumps, pill crushers, specialty mattresses, squeaky wheels, televisions, oxygen concentrators, ice machines, narcotic box alarms, bed/chair alarms, air/heat ventilation systems, ventilator alarms, and cleaning equipment. Different nursing units are likely to have different levels, depending on how much and which kinds of medical equipment are being used.

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Over time, the workgroup came up with a number of ways to cut down on noise. They worked with Housekeeping and other departments to secure prompt service for rattling air units and squeaky wheels on carts. One of the workgroup members, a wound care specialist, found a pressure relieving mattress to rent/purchase that does not rely on sound alarms. They replaced the old pill crushers (which were especially noisy at night) with another model that is much quieter. They also found quieter ice machines.

One of the biggest changes was the elimination of the bed and chair alarms. The workgroup requested that the Falls Committee evaluate the use of these alarms, and concluded that they not only did not aid in falls prevention, they caused noise, fear and confusion for the person and for those around him or her. Isabella has now eliminated the use of these devices.

While overhead paging at Isabella was eliminated long ago, the workgroup found that the call bell system on the nursing units is often annoying and intrusive. The workgroup met with management to recommend decreasing the volume of the call bell system, which they discovered varied from unit to unit. In addition, noiseless systems are being explored, with a view to eventually completely replacing the current call bell system. For the future, Isabella is also looking at using ceiling tiles that are more effective at absorbing noise.

**Quieting the chatter**

The “People Noise” workgroup came up with an interesting approach to sensitizing staff to the noise at the nursing station/office on the units. They purchased a “Yacker-Tracker,” which is a device that looks like a traffic light, and moves up or down from green to red, depending on how high the noise level is. The workgroup moved the device around to different units and departments to help staff become more aware (especially at shift change) of noise levels.

This workgroup also looked at the noise created by residents who, because they are in distress, often call out or moan. Not surprisingly, they concluded that the only effective approach is to learn as much about the resident as possible, including investigating the potential causes of the resident’s distress, as well as what brings him or her comfort. This takes time and requires the participation of all staff who interact with the resident; however, it can bring about a real improvement for the resident who is suffering.