

# nursinghomes

**feature article** BY MARVA SEROTKIN **LONG TERM CARE MANAGEMENT**

## Technology's 'Declaration of Independence' at The Boston Home

This historic facility exploits modern technology to give wheelchair-bound residents a hands-free environment

The Boston Home—a historic residence in Dorchester, Massachusetts, that sits high on a hill among the neighboring triple-decker houses—is a not-for-profit long-term nursing care facility that is home to adults with multiple sclerosis and other progressive neurologic diseases. Dorchester is a part of Boston with a history as old as America, and The Boston Home is part of the fabric of that community. It was the founders' mission that our residents would maintain an active role in the community and not be shut off from the outside world. We strive to meet this goal by hosting events that welcome neighbors into our home and encouraging volunteers to spend time with our residents.

Our service model includes exceptional clinical care, as well as services that address the physical, psychosocial, recreational, and spiritual needs of our residents. As the only facility of its kind in New England and one of only a few in the country, The Boston Home has created a "home healthcare" model in which our nursing staff helps residents to maintain independence.

In all of this, and more, assistive technology plays a key role. The Boston Home has been a pioneer in assistive technology, and we were eager to adopt these advanced systems to raise the bar in boosting residents' comfort, convenience, and control.

### Celebrating Advanced Technology

Recently, we invited the community to help



**Figure 1.** Residents surf the Net and send e-mail messages to loved ones at the Cyber Café.  
*Photo by Christopher Harting.*

us celebrate a major building renovation and expansion that integrated technology into our residential community. Our upgrades include wireless elevator and door access\*, which give residents hands-free control of their environment. The renovation also added overhead lifts\* to each room to efficiently transport residents, freeing staff to spend more time providing care. We added new patient rooms, as well as new and expanded areas for group activities.

Our renovation plan was the result of an initiative of our board of trustees' Strategic Planning Committee, whose objective is to establish The Boston Home as a center for excellence in clinical and residential services. Committee members met with trustees, staff, and building experts during an 18-month planning period. In addition to adhering to a tight budget, the most important challenge members faced was to maintain the same level of resident care throughout the two-year building process. To ensure that resident

care wasn't disrupted, the committee set up meetings between the build-out team and resident representatives to address concerns and update residents as the project progressed.

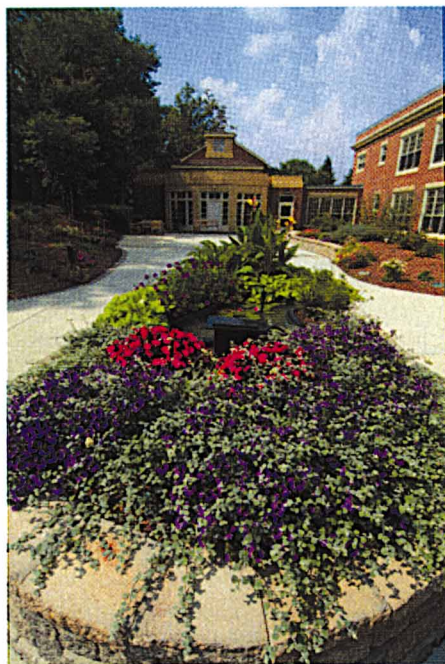
When reviewing the budget, we determined which new technology applications would help to maximize our residents' comfort and control in their wheelchairs. We use terms like "functionality" and "mobility" when discussing assistive technology, but we consider technologies that help nurture the mind and

spirit, as well. We embrace a philosophy that looks at the "bigger reality" for people who must deal with chronic disabilities. We put much thought and energy into finding technologies that would positively affect our residents' well-being.

### Promoting Independence

Our wireless elevator and door access system allows residents to travel independently from floor to floor. The elevator uses radio frequency identification (RFID) technology—a tag attached to the wheelchair enables the unit to receive and respond to radiofrequency queries from a transceiver. The long-range RFID reader is capable of reading tags from a distance of 9 to 11 feet. The tag automatically sends a signal to call the elevator when the resident approaches. Our residents have hands-free freedom to attend classes, socialize in the Cyber Café (figure 1), and visit other residents without staff assistance. The tag also opens our





**Figure 2.** Newly installed wireless systems at The Boston Home allow residents to enter the garden independently. *Photo by Christopher Harting.*



**Figure 3.** Resident rooms are fitted with an overhead lift system and wireless remote-control technology, which emits radiofrequency signals to "talk" to the sensors. The remote can be hand-, voice-, or chin-activated. *Photo by Christopher Harting.*

facility's back door, which leads to a serene garden area complete with a goldfish pond (figure 2).

We use an overhead lift system consisting of a mechanism and a sling that descends from a ceiling track, ready to raise, lower, and move the resident to and from bed, wheelchair, physical therapy mat, and shower chair (figure 3). In addition, residents are transferred in a sitting position, which means that less physical maneuvering is required, saving time and reducing the risk of injury to both residents and staff. Because of the efficiency of this overhead lift, aides can spend more time providing care, an important consideration since many residents have complex medical conditions, and aides need every moment to attend to them. This creates a more rewarding environment for our nursing staff, leading to high retention rates.

Our facility is also home to a host of hands-free equipment in addition to wheelchairs, including computers and environmental controls for beds, nurse call devices, phones, and TVs. According to Don Fredette, our assistive technology specialist, also known as "the wheelchair doctor" at The Boston Home, "These systems make a resident's wish technology's command."

### Expanding Our Space, Overcoming Challenges

In addition to technology upgrades, our renovation added 30,000 square feet for new dining rooms, 12 new patient rooms (for a total of 96), a new technology center, a new Activities Center (figure 4), an expanded dining room, and a more accessible outdoor terrace and garden.

While meeting regularly with the build-out team, we asked our residents to participate in the selection of fabrics and colors. They voiced their concerns to interior designer Janis Luedke of Steffian Bradley Architects and offered feedback to the design team. One resident concern, for example, was to choose a color palette offering enough contrast to allow residents with visual deficiencies to navigate their wheelchairs throughout the facility. Since neurologic disorders may lead to visual impairment, our team provided wayfinding for the residents through use of bold floor patterns and borders in corridors, as well as contrasting colors on door frames, doors, corner guards, wainscoting, and chair rails. Also, because some people with multiple sclerosis suffer from visual overstimulation and sensitivity, the team wanted to avoid colors that were too bright. Our team worked

closely with lighting designer Rick Rojas of Steffian Bradley Architects to keep the interior design simple. Because the facility has abundant natural light, for example, indirect overhead lighting was chosen to provide good contrast and increased visibility without glare. Sconces along the corridors provide additional aesthetics.

We also consulted a specialist from the New England College of Optometry to select colors that would be comforting yet effective in wayfinding. The team decided on a Southwestern motif, with terra-cottas, yellow-oranges, moss greens, rusts, and splashes of blue, which creates a sunny, warm environment that assists residents in

### The Build-Out Team

Project Manager Brian Kelleher of the Aspen Group; Architect Frank Kirwin of Chia-Ming Sze Architects, Inc.; Contractor Dennis Ingram of Linbeck Construction; Interior Designer Janis Luedke and Lighting Designer Rick Rojas of Steffian Bradley Architects; Robert Barry, Director of Plant Operations, and Larry Cosom, Maintenance Supervisor, both of The Boston Home.





**Figure 4.** The new Activities Center provides a place for residents to work on arts and crafts and other hobbies.  
*Photo by Christopher Harting.*

navigating the corridors. Visitors' chairs are finished in warm wood with colorful fabrics to create an inviting atmosphere. The design goal was to provide a safe, durable, and easy-to-maintain environment for this

wheelchair population while creating a warm and homey feeling throughout the facility. Resilient flooring\* makes for easy navigation of the wheelchairs, and special sink counters and recessed plumbing are

Marva Serotkin is President and CEO of The Boston Home in Dorchester, Massachusetts. Founded in 1881, The Boston Home is a 96-bed, not-for-profit, long-term-care facility that serves adults with Multiple Sclerosis and other progressive neurological diseases. Now celebrating its 125th anniversary and offering an outpatient rehabilitation program and The Boston Home Institute, TBH is only facility of its kind in New England and one of a few in the United States. It has earned a national reputation for providing progressive, long-term care. For more information, visit [www.thebostonhome.org](http://www.thebostonhome.org) or call 617-825-3905.

easily accessible.

Another challenge of the project was to use products with durable finishes to protect the walls, corners, doors, and elevators from wheelchair damage. To ensure optimal return on investment, on-site mock-ups were constructed to test these features for durability. After testing, the team selected fiberboard and vinyl wall guard.\*

### **Enjoying Our New Home**

Our newly renovated home is a warm, state-of-the-art environment that helps to nurture the residents' emotional comfort and reflects our community's sense of independence and spirituality. The advanced technology we use helps residents maximize control of their world, and the warm and homey décor maintains the spirit of residents and staff.

The Boston Home has become recognized as a national model for long-term care because our trustees and staff are not only experts in managing disease, but are also innovators in finding ways to empower our residents. We are helping our residents become more independent, more stimulated, more engaged, and more "at home" with themselves and their community. ■