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BEST Age exercise programs help frail seniors achieve independence

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COLD SPRING, Minn. — It was not for nothing that long-term care facilities became known as rest homes. Tim Tadych, director of therapeutic recreation at Assumption Home, says that particularly here in a rural community where many folks kept in shape working demanding, physical jobs, they feel entitled to kick back in retirement. And, by the time they enter a long-term care facility, getting or staying in shape is not a priority.

"A lot of farmers say, 'I've worked hard my whole life. I don't want to exercise,'" Tadych says.

About two years ago, Assumption set out to break through that exercise aversion with the "BEST Age Fitness Program," an ambitious strength-building regimen. Assumption has group exercise classes three times a day, six days a week. In addition, patients mount recumbent cross trainers three times a week to get their heart rates up.

Assumption came to BEST Age through its membership in the Care Ventures Cooperative, a group primarily made up of rural, independent long-term care facilities. Care Ventures members jointly sought and won incentive payments from the Minnesota Department of Human Services to support the exercise initiative. In addition to Assumption, other CHA members launching BEST Age programs through the cooperative's grant include the 79-bed Mother of Mercy Campus of Care in Albany, Minn., and the 296-bed Saint Therese Home in the Minneapolis suburb of New Hope.

The BEST Age acronym stands for balance, endurance and strength training. Flexibility is another goal of the gentle movements. Participants exercise in groups and work one-on-one with trainers. They use light weights and resistance bands. The program was developed by exercise physiologist Shane Paulsen, when he was working at a cooperative member home in Osakis, Minn. Members have fine tuned and expanded the core exercises. Instructors modify movements and offer alternatives in line with the physical limits and cognitive level of individuals.

Saint Therese, the only metro area facility in the cooperative, has the largest physical therapy department among participants in the BEST Age program. During the second year of the program, which ended in September, its therapists served as consultants to the other facilities, assessing progress and refining programs.

John Hoefs, Mother of Mercy's chief executive and administrator, says BEST Age helps residents lead fuller lives. "It's the right thing to do for our seniors," he says. "Patients feel proud of their progress and like to show off to family members." Hoefs, too, takes

pleasure in the seniors' progress. He says he broke out in an ear-to-ear grin recently when he saw four seniors in their late 90s peddling away on recumbent bikes.

More than half of the patients in the 80-bed Assumption facility come to exercise classes. Octogenarians, nonagenarians and centenarians are regulars in the program. Racey Gasior, the personal trainer who serves as the facility's BEST Age coordinator, works with individuals to establish fitness goals. One person may want to sit erect in a wheelchair, another to stand unassisted, a third to walk without tottering. One may come to class six days a week, another four days a month.

Tadych has been "blown away" by the number of residents engaging in the program. It turns out that just as stiff joints can be loosened through movement, seniors' attitudes about exercise also grow more flexible with gentle persuasion.

Fountain of youth

The National Institute on Aging calls senior fitness the fountain of youth. While most of the research on the benefits of exercise for the elderly has been done on seniors healthy enough to live in the community, studies have shown that physically frail seniors benefit from exercise too.

Exercise may help a frail individual build or maintain the strength and balance to walk to the bathroom unassisted. It can diminish or eliminate pain caused when muscles contract or joints lock from lack of use. Exercise stimulates appetite and helps people sleep better. As an added incentive, BEST Age group exercise classes are social and playful. Saint Therese residents play wheelchair tag each Friday.

"Remember our motto, 'We fed it; we've got to lift it,'" Assumption exercise instructor Lila Donlin jokes, as she prompts women and men to push themselves up out of their wheelchairs. Able participants practice balancing on one foot and marching in place. As other staffers move about the room to offer physical support and encouragement, one gentleman nods off.

Tadych recounts anecdotal evidence that exercise reduces suffering before death. "Normally, in the past, we would see people linger in bed for weeks before they died. Now, we are seeing more people getting more out of life. They are active one day, and gone the next."

State support

Val Cooke, manager of the Minnesota Department of Human Services Nursing Facility Rates and Policy Division, says that quality indicator data for the first 15 months of the BEST Age program point to success. Cooke reports that participants had a 10 percent improvement in quality of life indicators such as mood and ability to engage in meaningful activities and a 10 percent improvement in physical functioning.

In the first two years of the BEST Age program, the state paid participating facilities a 5 percent add-on to the per diem rate for Medicaid and private pay patients. Federal funds covered roughly half of the incentive expenditures.

A three-year follow-on grant, which began Oct. 1, places greater emphasis on building partnerships with hospitals toward the ultimate goal of transitioning appropriate patients to the lowest level of care possible, and at helping seniors living in the community maintain independence. The latter outcome would lower the state and federal government's Medicaid exposure. Cooke said the effort will include community-based chronic disease management.

Mother of Mercy's Hoefs says the state also will save money if the exercise programs help long-term care patients grow strong enough to leave the nursing home or lower their level of disability. Medicaid reimbursements for long-term care patients are set based on each patient's disability.

A fine balance

One unexpected result of the BEST Age training is that many participating facilities have recorded increases in the number of resident falls. Amy Taylor-Greengard, rehab fitness director for Saint Therese, points out that while her facility has experienced an increase in falls, there have been fewer falls with injuries.

Exercise can make patients feel stronger and more confident; as a result, more people begin to get up on their own, and they may do so without staff knowledge, she says.

When Saint Therese began BEST Age, its wheelchair bound patients worked out with dumbbells to build upper body strength. They practiced standing, sitting and kicking out with their legs to build lower body strength. The facility found that individuals strong enough to use their arms to push up from their chairs, in many cases lacked leg strength and balance.

To strengthen the lower extremities, Saint Therese staff added exercises using cuff weights strapped to the ankles of wheelchair bound seniors.

Saint Therese got its own two-year grant from the state beginning in October and Taylor-Greengard says it will use it to develop a program with a continued emphasis on falls prevention including assessment and training. That effort will be part of a holistic approach to fitness that combines exercise with pain management.

Other BEST Age practitioners also will emphasize falls prevention for patients and community members going forward. Fall frequency is a pre-dictor of nursing home admission and serious injury, which can lead to death. "Everyone will be truly energized around that," Hoefs says of the falls prevention initiatives. He expects nursing homes to go beyond balance training and look at environmental contributors to falls such as lighting and floor surfaces, and medical contributors such as drug side effects.

When it comes to exercise, ability trumps age

When the Saint Therese Home assigns residents to slots in its BEST Age Fitness Program, a participant's age isn't a big factor. Instead, Saint Therese groups nursing home patients by both cognitive level and physical ability. People are judged to have high, moderate or low cognition levels and high, moderate or low physical ability. That system produces nine groups roughly matched by ability.

Amy Taylor-Greengard, Saint Therese's rehab fitness director, says getting the groups right was a surprisingly tough hurdle in implementing BEST Age. An ongoing challenge is that a trainer's knowledge of the effort necessary to build strength in a very elderly person may be out of the senior's comfort zone. The average age for BEST Age participants at Saint Therese is 86.

Research shows that a senior should exercise at 40 percent to 60 percent of the maximum free weight or resistance he or she can tolerate once, and only once, through a controlled range of motion, Taylor-Greengard says.

It's time to increase the weight or resistance when a person can perform more than 12 repetitions, but convincing the seniors that it is time to advance requires finesse.

"That's probably been one of our biggest challenges," Taylor-Greengard says. "Most seniors think they are really working hard when they are only lifting a pound," she says. "If they are really trying to get stronger, to get better, they should be lifting increasingly heavy weights."

The nursing home is adjacent to Saint Therese's senior living apartments, and many of those tenants participate in BEST Age outreach classes.

A survey of the apartment dwellers showed that one out of three seniors have a high fear of falling, a concern that Saint Therese hopes to address with its increased focus on fall prevention training going forward.

In addition, the Saint Therese Fitness Center, which serves the apartments and nursing home, acquired equipment under a grant that it uses to assess and treat chronic balance and mobility disorders. The NeuroCom machinery puts a patient through balance challenges and gathers data on the individual's sense of touch and body position, equilibrium and responses to visual stimulus, all of which have a role in balance.

Taylor-Greengard says balance training is accomplished by making people lose their balance in a safe setting and teaching them to recover by adjusting their posture.