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## Two Vincentian nursing homes experiment with robotic pets for Alzheimer's patients

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By Len Barcoucky, Pittsburgh Post-Gazette



Lake Fong/Post-Gazette

Millie Lesek, 89, pats Paro, a \$6,000 furry robot at Vincentian Home in McCandless. At right is Eileen Oldaker, her daughter.

When Millie Lesek called his name, the white furry creature looked over at her. Then Paro cooed and blinked, his long lashes sweeping past his large dark eyes.

"I love you, too," she told the lifelike "therapeutic robot."

"You must be eating too much," the 89-year-old grandmother joked. "You look a little fat." As she petted him, Paro responded with a variety of sounds, ranging from a purr to a yelp.

According to her daughter, Eileen Oldaker, of Ross, Paro brings out the best in Mrs. Lesek.

A longtime resident of Pittsburgh's North Side, Mrs. Lesek came to the Vincentian Home's nursing unit in McCandless almost three years ago. She has symptoms of Alzheimer's disease that cloud her mind and sometimes produce terrible hallucinations.

"When the staff brings Paro to my mom and she takes him in her arms, it seems like all her fears go away," Mrs. Oldaker said.

Mrs. Lesek becomes more lucid, her daughter said. During a recent visit, she was eager to answer questions about her Pittsburgh girlhood and long marriage to Myron Lesek, who died in 2007.

Paro and seven other "personal robots" will be interacting regularly with patients like Mrs. Lesek at Vincentian Home and at Marian Manor in Green Tree for the next six months. The sophisticated robots, each the size and shape of a baby harp seal, are part of an experiment to judge the value of the devices in the care of patients with dementia.

"I was skeptical," said Maureen Dean, Vincentian's activity director. "I thought Paro would be just a big expensive mechanical toy. I thought we would be better off buying more bingo prizes or flat-screen TVs.

"But Paro is proving to be worth his weight in gold," she said. Like other staff members at Vincentian Home, she always refers to the lifelike device not as "it" but as "he."

Employees at Marian Manor are reporting similar experiences with the Japanese-made robot, according to administrator Susan Lewandowski. "The Paro provides an outlet for residents to pursue their nurturing side," she said. "It has a calming effect."

Both nursing homes already rely on visits from live animals as therapy for their patients.

Now a part of Vincentian Collaborative System, Marian Manor was founded by the Sisters of the Holy Spirit and shares the religious order's suburban campus. The nuns have a dog named 'Duke' as a pet, and they will bring him over to the nursing home, Ms. Lewandowski said.

A dozen colorful finches and a single yellow canary live in a floor-to-ceiling aviary at Vincentian Home. "Residents know the birds' schedule, and they will come to observe them when we bring in water for their baths," Ms. Dean said. Pet-therapy dogs also make bi-weekly stops at the McCandless facility.

Family members of patients are encouraged to bring their animal friends for visits - as long as they have had rabies vaccinations and are up-to-date on their other shots.

A robotic companion, however, offers some additional advantages.

"Paro can be here 24 hours a day, seven days a week," Ms. Lewandowski said.

The robot is covered with nonallergenic synthetic fur so there is no pet dander problem. He is never tired or in a bad mood, and he never will be tempted to nip a resident, Ms. Dean said.

Over the next six months, staff at both institutions will be monitoring and measuring patient mood, behavior, weight, anxiety levels, ability to communicate and other physical and psychological factors, Vincentian spokeswoman Robin Weber said.

The technology inside Paro was developed about 16 years ago by a Japanese engineer named Dr. Takanori Shibata. The robots have been used in institutional settings since 2003. The eight Paros purchased by Vincentian Collaborative System represent the eighth generation of Dr. Shibata's technology, according to Christine Hsu, general manager for Paro Robots in Itasca, Ill. Para Robots is the U.S. distributor for the artisan-made robots which are manufactured by Intelligent Systems of Japan. Each costs about \$6,000.

Money for their purchase came from a \$54,000 grant authorized by Allegheny County Court Judge Frank J. Lucchino. The funds came from four now defunct nonprofit organizations controlled by a woman convicted in 2005 of health care fraud.

About 1,400 Paros are in use around the world, Ms. Hsu said. They are popular in Japan in hospitals and nursing homes, and they serve as home companions for those who are too old or frail to keep a live pet or whose landlords will not permit animals, she said.

About 40 Paros reside in U.S. nursing homes, she said. They were certified last year by the Federal Drug Administration as a Class 2 medical device. Class 2 items include massage chairs and similar products used in rehabilitation.

While they may look like just another stuffed animal, Paros contain two 32-bit central processing units and about 100 sensors that respond to touch, light, sound, temperature and posture.

Scratch the top of Paro's head, and he will snuggle closer and respond with a kind of meowing. Pinch his flipper, and he pulls back and squeals. Over time, he will "learn" to respond to a familiar voice, which appeared to be the case when Mrs. Lesek called out to him.

"We want our residents to be active and engaged," Ms. Weber said. "Contact with Paro seems to help bring them back to life."

Mrs. Lesek shares her large, sunny room with three other residents.

"She is much better when Paro is around," roommate Mary Florian, 94, said. "It's like she understands his language." Ms. Florian, a retired physical therapist, lived for many years in Penn Hills and Downtown Pittsburgh.

"She doesn't like to give him up," said Esther Schallack, 92, who lived in Avalon before coming to the Vincentian Home.

Ms. Weber pointed to the variety of stuffed animals that Mrs. Lesek and her friends keep on their beds, dressers and closet shelves.

"They see the differences between a stuffed toy and Paro in how he reacts to them," Ms. Weber said. "They know that a stuffed toy is not Paro."

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