



## Health

# Robot nurses learn bedside manners

**Machines may one day assist with routine health duties**

A health care worker, left, guides an experimental robot called 'Companion' as it interacts with a patient at a care center in Calabasas, Calif.



InTouch Health Inc. via Reuters



LOS ANGELES, March 6 — Its bedside manner has kinks to work out, but an experimental robot may one day help the U.S. health care industry cope with burgeoning ranks of the elderly and

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**‘This technology enables health care professionals to care for people in remote locations at a fraction of the time it would normally take.’**

— **LOREN SHOOK**  
Chief executive, Silverado Senior Living

FOR NOW the robots operate primarily as a form of mobile video telephone allowing patients and doctors to communicate. But eventually, they may help the health care industry serve millions by wheeling patients to dinner, or even taking temperatures and drawing blood.

“This technology enables health care professionals to care for people in remote locations at a fraction of the time it would normally take,” said Loren Shook, chief executive of Silverado Senior Living, an operator of assisted living facilities for people with Alzheimer’s disease.

Silverado’s Calabasas, Calif., care center is the site for a clinical trial of a robot made by InTouch Health Inc. that is designed to allow real-time, one-on-one communication between doctors and patients, health care management and staff or between patients and their families.

The mobile robot, called the Companion, is fitted with a camera that films the patient while the caregiver’s face appears on the robot’s television screen-like head.

Controlled from an off-site console, the robot uses software and a broadband wireless Internet connection to allow the patient and caregiver to see, hear and talk to each other.

### **PATIENTS WARM UP TO MACHINES**

By the end of life, people with advanced Alzheimer’s have lost about a third of their brain, significantly damaging their ability to deal with new things. But patients at the Silverado center seemed to warm to the robot.

“The older you get, the more disagreeable you are to change,” Shook said, acknowledging initial worry that the robot might frighten some residents. “To our delight, some just pointed to the robot and laughed. Others talked to it.”

The robot drew quizzical looks from Silverado residents but they were soon chatting and preening with pet dogs when Silverado’s vice president paid a recent remote-broadcast visit via the device.

The machine is also being used by other



experts at Silverado's San Juan Capistrano, Calif., headquarters to train workers, help guide care for patients with problems like walking difficulties and by the son of one patient to keep in touch with his mother.

"The goal is to extend the reach of health care ... A nursing shortage and cuts in government reimbursement are straining the system and its going to get worse," said Yulun Wang, chief executive of InTouch and founder of Computer Motion Inc. which makes robotic systems used in surgery.

The American Association of Retired Persons projects that the ranks of senior citizens, driven by the aging baby boomer generation, will climb to about 40 million in 2010 and to around 70 million by 2030.

"Compared to 50 years ago, people can expect to live 15 years longer, but at the same time the costs of caring for the elderly are rising," Wang said.

### **IMPROVING EFFICIENCY**

Wang believes the robots offer one solution that takes advantage of high technology and the Internet to improve the efficiency and, he says, effectiveness of care delivery.

Some key issues — like how a doctor who treats a patient via the robot rather than in person would get paid — are still being ironed out.



Silverado officials said they believe a law is likely to be passed in the next year or two that would allow for complete reimbursement of remote treatment at full-scale nursing homes but said it will take more time for payment in the assisted-living setting.

"We anticipate that the robot will pay for itself," Shook said, saying that using the devices cuts travel costs, reduces the need for emergency room visits and improves staff training, which reduces liability risk and employee turnover.

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The technology is still at an early stage, Wang said. "First there is communication, but the second thing would be manipulation. Eventually the robot could be designed to do things like push a wheelchair or even be used in private homes," he said.

The robots have not received Food and Drug Administration approval to perform medical tasks yet. But the company believes they ultimately will and sees the risk of mistakes or malfunction as low.

Executives noted that the technology borrows from robots used to perform surgeries and said those machines have worked without problems.

One issue that also must be addressed is how treating patients remotely might affect the quality of care doctors' deliver. Remote treatment also raises questions about whether doctors will be more liable to miss symptoms or trouble signs when not at the patient's bedside.

For now, InTouch Health plans to lease Companion robots to institutions caring for the elderly, probably at around \$2,500 to \$3,000 per month.

"It is a breakthrough event when people with dementia can tolerate another form of engaging them in life," Shook said.

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