



July 28, 2010

The Technology for Monitoring Elderly Relatives

By **ERIC A. TAUB**

“IF I ever need to go to a nursing home, kill me first.”

That was what my mother had said to my brother and me from time immemorial. Of course, we never carried out her wish, but at 98 — her mind still sharp, but her muscles failing (after several serious falls) — she reluctantly agreed to enter her worst nightmare: assisted living. Until her death at 100 last July, she was convinced that she had made a mistake.

Leaving one’s home, friends and the life one knows for a nursing home is neither easy nor often pleasant. But for many of the elderly, there has been little choice. When you cannot take care of yourself, you may need constant assistance to help you remember to take your medicine, to make sure you are active and to generally make sure you remain safe in your home.

In the last few years, a series of technological developments has given parents and their adult children some new options (as described in a related article that begins on Page 1 of this section). Devices and Internet-based solutions are becoming available that allow caregivers to keep an unobtrusive, high-tech eye on their family members, ensuring that they’re safe, healthy and well cared for.

“If an individual can be safe at home, family relationships are enhanced and costs are reduced,” said William Kaiser, a director of the **U.C.L.A. Wireless Health Institute**, a research group that examines the intersection of technology and health care. “New technologies are creating a revolution in the ability of individuals to stay at home,” he added. “The benefits to society are profound.”

Coordinating Care

Caring for the elderly is rarely the job of a single person. But coordinating that care can be a burden of its own. A simple way to find and organize family and friends is through the Web site **Lotsa Helping Hands** (lotsahelpinghands.com). On the free site, caregivers set up a members-only

community (you invite others to join). When a task needs to be accomplished, whether it is taking a person to the doctor or doing the shopping, it is posted on the site's calendar and an e-mail alert goes out to the community. Those available to help sign up.

Lotsa Helping Hands can take the awkwardness out of asking specific individuals for help, while making it easy for everyone to see what needs to be done.

Basic Home Monitoring

Philips Lifeline (lifelinesys.com) is a home-monitoring system that provides a basic but essential set of features for about \$38 a month.

When an emergency occurs, users push the button of a pendant that can be worn around the neck, alerting the Lifeline call center. An operator talks to the client through a speakerphone device to find out what is happening. If there is an emergency, or there is no answer, the call center phones caregivers and emergency medical personnel.

For an extra \$12 a month, the Lifeline service will add its AutoAlert fall-detection feature, contacting the call center automatically whenever a fall is detected. According to Rob Goudswaard, the head of innovation for Philips Home Monitoring, the system has a very low level of false positives.

Customized Services

For those with advanced physical ailments, the ability to contact emergency personnel may not be enough. It wasn't for Jean Roberts, a 79-year-old retired nurse who had a brain [aneurysm](#) 20 years ago, and now suffers from a [seizure disorder](#). She and her daughter, Carol, 52, who is also disabled, set up a system of customized sensors from GrandCare Systems (grandcare.com).

With GrandCare, which averages between \$15 and \$25 a day, Carol receives cellphone alerts whenever a user-defined set of parameters is breached in her mother's nearby Daytona Beach, Fla., home.

"I used to call and check on her constantly," Carol said. "If she gets confused, she wouldn't remember to push a pendant."

Carol is automatically alerted if her mother's front doors are opened before 7 a.m. or after 10 p.m., and a bed sensor alerts her if her mother doesn't get out of bed by 9 a.m.

If her mother's home is too hot or too cold, she knows that, too. And if her mother begins to get

confused and wanders rapidly from room to room, her daughter also receives an alert.

To help the elder Ms. Roberts feel more connected, she can receive e-mail messages and photographs through the GrandCare system, displayed on her TV or an available touch-screen display.

As her mother ages, Carol expects to add other features. “If she gets worse, we’ll write another parameter, that she can’t leave the house unless I’m notified,” she said. “She has no intention — none — of going into an assisted-care facility.”

For the monitoring of symptoms associated with [heart failure](#) and [diabetes](#), Ideal Life ([ideallifeonline.com](#)) in Toronto offers a number of devices, including a scale, a blood-pressure meter and a glucose monitor that automatically send data to the company’s Web site, where it can be examined by a caregiver. [Text messages](#) or e-mail alerts can also be sent automatically to a caregiver’s smartphone.

The Ideal Life products, now offered at no extra charge only through certain health plans like California’s Anthem Blue Cross and physicians’ groups, will be sold directly to consumers in early 2011.

Pill-Taking

The elderly are often in danger of forgetting to take their medications, or taking too much. So a number of companies, including Philips, offer pill dispensing and monitoring devices.

Philips’s Medication Dispensing Service ([managemypills.com](#)), for example, uses a tabletop device that plugs into both an electrical and telephone outlet. The machine can be loaded with up to 60 doses of medication, each contained in a small plastic cup. When programmed by a nurse or family member, the dispenser will remind users with a spoken message that their medication is ready. Pushing a button releases a dosage cup into a tray.

If, after 90 minutes of reminders, the button is not pushed, the device sends a message to a designated caregiver. The device and service, which costs \$75 a month, does not know if the pills are actually taken, only if the button was pushed.

Out-of- and In-Home Monitoring

In addition to assistance and monitoring in the home, there are services that can help seniors when they are out of the house.

The ActiveCare Personal Assistance Link (\$59 a month, activecare.com) resembles a cellphone. It has software that can detect when a user has fallen and will automatically contact a call center if that happens, or if the user pushes the device's Care button; it includes GPS technology that can locate the user. The device also functions as a simplified cellphone. Users can contact friends and relatives from a 20-number phonebook with four dedicated speed-dial buttons, or ask the call center to dial for them.

The center keeps a list of a customer's maladies and drugs, and provides them to emergency services; it will also contact caregivers when needed.

A similar device, MobileHelp (mobilehelpnow.com), connects a user with a live operator when the button on its small white unit is pushed. Equipped with GPS technology, MobileHelp (\$35 a month) can locate a user as well.

The (Very Near) Future

The U.C.L.A. Wireless Health Institute expects to have a personal activity monitoring system available to consumers, through partners, later this year.

To encourage the elderly to exercise, it will have sensors that track a user's motions, and will be able to distinguish between walking on level ground, going up and down stairs, and other physical activities. The information will then be transmitted to a caregiver or stored on a server.

Next year, the institute expects to have a commercial version of its prototype SmartCane (bit.ly/d8eeKA), which uses embedded sensors that measure pressure on the handle and tip to determine if its user is walking with the proper gait, or in a way that would increase the likelihood of a fall. If a fall does occur, a caregiver would be notified.