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New ideas to ease into old age

By Roxana Popescu International Herald Tribune

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Tony Knopp, a 58-year-old administrator with the Massachusetts Institute of Technology, says he is ready to retire "yesterday." With \$1 million in pensions and savings combined, he and his wife want to spend their golden years vacationing in Florida and enjoying their second home in rural Vermont.

The couple plans to retrofit that house to include a wireless sensor and medical monitoring service that sends a stream of signals to health care professionals or their relatives, reporting possible problems before they become serious disruptions.

"My parents' generation had fewer choices in terms of health care options as they grew older," Knopp said. "It's not either living at home or going to a nursing home. There are a lot of in-between stages - widgets and wiring that allow an individual to be more self-sufficient in a way that 20, 30, 40 years ago was not the case."

Unobtrusive, preventive, personalized and remote: Welcome to the future of geriatric health care. Increased life spans, more education and more disposable income than any preceding generation means that the baby boomers - those born between 1946 and 1965, the elder members of which are standing on the threshold of retirement - will demand technology as sophisticated as their expectations about aging.

According to estimates by the Metlife Mature Market Institute, the 78 million boomers in the United States are spending more than \$1 trillion annually on housing, insurance, pensions, transportation and health care.

And they are eager to invest in products that will allow them to feel younger and remain active longer, analysts are finding.

"There's hardly a business that can't capitalize on the aging of the boomer population," said Maureen Mohyde, a gerontologist with the financial services company Hartford Group.

Companies have noted the potential, creating products that prevent and manage conditions before the need for costly medical interventions arises. These developments promise to transform the home into a personalized health care center, as both public companies and start-ups attempt to capitalize on a niche market that could boom to \$34 billion by 2015 in the United States alone, according to a study by Forrester Research.

Many devices build on existing concepts, like the remote monitoring services adapted from home security systems, where the challenge will be adding value while maintaining people's privacy. Other areas of interest are cognition, mobility and communication.

But the prevalent trend is to "blend health care, lifestyle and technology so they can be ubiquitous," said Mary Sargent, a manager with Philips Medical Systems, a division of Philips Electronics.

The macroeconomic forces are already in place. A 2005 Forrester study found that 52 percent for U.S. households said out-of-pocket health care expenses increased, with the largest jump for those aged 60 to 64, primarily because of higher health insurance premiums. In the European Union, deductibles and pharmaceuticals continue to spiral out of pace with pensions. By 2030 the number of people over age 65 will have doubled globally, according to the U.S. Census Bureau. Spending on the elderly in the United States alone will total nearly \$1.8 trillion over the next 10 years, according to figures from the Brookings Institution and the Congressional Budget Office. That amounts to almost half the federal budget, up from 35 percent in 2000.

The shift is profound not only in scope but in speed, experts say, leaving governments and policy makers little time to play catch-up once the aged start to flood health care networks.

"We are looking at fundamentally disruptive demographics," said Joe Coughlin, director of the Age Lab at the Massachusetts Institute of Technology. "Whether we like it or not, aging is coming. So we need to find new policies."

Part of the solution is technology, which could help slash costs of traditional health care by reducing the need for hands-on care and cutting down on hospitalization through prevention and remote monitoring. This potential is leading companies to start to focus on this market, which, many say, remains largely untapped.

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"If we can prove that we can increase efficiency and lower overall cost by putting technology in the home, we believe we'll either get consumers to pay for it, or get some of the payers to help foot some of the bill," said Steve Agritelley, director of the Health Systems Research Lab at Intel, the semiconductor manufacturer.

Matthew Narrett, chief medical officer for Erickson Health System, the largest nursing and home care network in the United States, with 16,000 residents, said his goal is to move 30 percent to 40 percent of health care costs from hospitalization to outpatient and preventive care. "Looking at the demographics, we simply will not have the money to provide health care 15 years from now in the way that it is provided today, so we need to shift to lower cost solutions," he said.

Companies in businesses that serve the senior market, from electronics to pharmaceuticals, are recognizing the problem - and the opportunity.

"For us, it's an issue of long-term growth," said Terry Fassburg, a spokesman with Philips. "The population is growing at such a significant pace that we see it as a significant business."

Philips has developed a communications device called Motiva for the European market. It connects seniors living by themselves to their care network through a television, using the remote control to input or access information. The technology is so familiar that it is unobtrusive, Sargent said.

"The hospital walls need to be extended out, and we need to look at health care in a new way, given the aging global population," she said.

Martin Illsley, a researcher in France with Accenture, the consulting spinoff of Arthur Andersen, has developed Intelligent Home Services, which tracks a resident's patterns and looks for deviations. One of the devices is a family picture that connects a senior by telephone to the person in the photo when he or she stands in front of it. It serves as a prompt for those with memory loss, but it is also useful for children to check in on their parents.

Illsley speculated that the technology could be made available on a subscription basis.

As the walls of the home and hospital become more porous, privacy issues mean companies will have to be selective about what information they extract and how they transmit it, analysts said.

In the area of communication, Qualcomm technology is being used in mobile phones that can monitor blood glucose levels or record EKGs. Simplified three-button cellphones by Mobi-Click, a Swiss company, are geared to people with memory loss: They accept incoming calls but dial only three preprogrammed numbers.

For those with Parkinson's disease, which attacks the muscular and nervous systems, Intel has developed a home assessment device that lets patients track the disease more regularly than only with doctor's visits and adjust drug dosages as symptoms progress.

Finally, while many devices allow seniors to remain in their homes longer, mobility is another priority. Michel Parent at Inria, a research institute in Paris, is developing cybercars, or automated vehicles that could take seniors to preset destinations, while MIT's Age Lab is working on enhancing safety behind the wheel. Knopp has participated in three pilot programs there. After a stint working as a cab driver during college, he said was partial to the Volkswagen Beetle, which enables people with reduced visual and motor skills to operate vehicles by providing extra information about their surroundings inside and outside the car.

Longevity doesn't come cheaply, and developing technology is one piece of a very complicated puzzle.

"We have found that the technology is the easy part," Coughlin said. "There are so many solutions chasing the problem of aging. But what we are lacking around the world are comprehensive policies by governments and strategies by business to implement the solutions that are available."

The financial services sector will start to provide products specifically designed to help people manage their pensions toward specific goals and mitigate longevity risks, said Mohyde of Hartford Group.

"You will begin to see emerging from the financial services industry a very large array of new products, because the landscape of retirement is very different," she said.

On the marketing end, analysts are advising firms to get to know the baby boomers, who, they say, are fiercely attached to their identities as iconoclasts and decision makers.

As Furlong advised: "Do not call them seniors. They will never be seniors."

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