

CANADIAN Healthcare Technology

Smart systems enable senior citizens to remain in own homes longer

BY NEIL ZEIDENBERG

OTTAWA – With the number of Ontario senior citizens expected to double over the next 20 years, a new project that uses technology and safer designs to create “smarter” apartments for seniors makes a great deal of sense. The result may give the elderly greater independence and the option to remain in the old, familiar places, rather than move to long-term care institutions.

The project is called TAFETA (Technology-Assisted, Friendly Environment for the Third Age.) It addresses three key issues facing an aging population: declining health, decreasing mobility and decreasing cognition.

“The team will address these issues by coordinating remote health monitoring such as bio-sensors and video-conferencing, developing safer environmental designs and building prototype apartments,” says Dr. Frank Knoefel, medical director, geriatric rehabilitation service, SCO Health Service.

Project TAFETA is led by the University of Ottawa Institute on Health of the Elderly, along with a half-dozen partner organizations including:

- March Networks Corporation
- Carleton University Faculty of Engineering and Design

- SCO Health Service
- Residence Sacre-Coeur of the Sisters of Charity of Ottawa
- Central Park Lodges
- The Change Foundation

TAFETA brings together experts from healthcare, engineering, technology, research and design to build more appropriate living spaces for the elderly. The smart apartment is a first in Ontario, and will free up caregiver time, thereby making better use of community practitioners and resources.

For its part, March Networks Corp. is providing its home telehealth technology, developed in response to a growing need to monitor and provide early intervention and prevention services to aging patients in their homes.

“A smart apartment benefits frail seniors by adding safety features to their home environments, thereby preventing unnecessary hospitalizations or premature entry to a long-term care facility,” said Sandra Lowenstein, manager of market development for home telehealth, March Networks.

Moreover, its videoconferencing technology can offer support to those seeking education or counseling on a variety of specific topics such as diet and medication compliance.

During phase one, the project concentrates on March Networks’ remote health

monitoring application to monitor patients with hypertension.

As the project continues, the remote health monitoring kit will make use of new Bluetooth capabilities, allowing the system to communicate with other Bluetooth-enabled devices in the apartment. Bluetooth technology can improve transmission of patient data by using the relatively new, low-powered wireless standard. Wired systems then carry the information back to a central office.

“A good example of this would be the weigh scale,” said Lowenstein. “The data from that can be transmitted through our health monitoring kit back to the provider central station,” at the Elisabeth Bruyere Health Centre.

Although the initiative looks at creating safer living spaces for the elderly wishing to live independently, actual testing of the technology will involve patients who reside in a long-term care facility; namely the Residence Sacre-Coeur of the Sisters of Charity of Ottawa.

TAFETA received \$80,000 in funding from The Change Foundation; a group mandated by the Ontario Hospital Association in 1997 to promote, support and improve the delivery of healthcare in Canada. The other partner organizations are donating support through their own expertise and resources.