New GPS technology helps support independence

*Trial project helps prevent seniors from getting lost due to memory impairment*

CALGARY — A collaborative research project is using GPS technology to locate Albertans with cognitive impairment who have wandered or are lost.

The Locator Device Project is underway in Calgary and Grande Prairie. The six-month trial currently involves 10 clients in each city and examines how GPS technology within a wrist watch, a shoe, and a small cellphone-like device may help improve the safety and quality of life for these Albertans and their caregivers.

The project is being jointly run by researchers at Alberta Health Services (AHS) and the University of Alberta’s Faculty of Rehabilitation Medicine, and is funded by Innovation and Advanced Education within the Government of Alberta.

“The Alberta government supports and encourages Alberta ingenuity—innovative ways of using technology to find solutions to social challenges,” says Dave Hancock, Premier and Minister of Innovation and Advanced Education.

“This research project has tremendous potential to improve the quality of life for thousands of Alberta seniors affected by cognitive impairment and provide peace of mind for the loved ones who care for them. Seniors, student researchers, the technology sector and our society can all benefit from this initiative.”

“We know that as Alberta’s population ages, our province will be facing increasing issues of senior’s safety as we deal with health conditions such as dementia,” adds Fred Horne, Minister of Health. “It is important that we explore ways to mitigate this risk and this research project will give us important information on how to do that.”

Currently, more than 40,000 Albertans are living with a form of dementia, and about three out of every five seniors with dementia living in the community experience wandering, which poses significant safety risks and can be difficult to manage. The number of Alberta seniors with dementia is expected to exceed 100,000 by 2038.

“We have a responsibility to provide Albertans who are at risk with supports that will enable them to enjoy their independence without coming into harm,” says Don Juzwishin, director of Health Technology Assessment and Innovation for AHS. “And we believe the locator project, which uses sophisticated GPS technology, will also support family caregivers and emergency responders to assist dementia clients who have wandered or become lost.”

Trial results will be analyzed later this year by faculty and graduate students from the University of Alberta and used to inform technology options for Home Care clients and their families.
The GPS technology provides caregivers with real-time location information through text messaging and email with programmable software. GPS-user location is reported and the coordinates are plotted on a Google map. Caregivers can access this technology through a personal computer, tablet or smartphone. SafeTracks GPS of Red Deer is the GPS technology provider.

“Research suggests that GPS technology supports those living with dementia to be safe, independent and active members of their community,” says Lili Liu, an occupational therapist at UAlberta, whose research includes the application of technologies to support health care aides in home and community care.

“This trial study will help us determine if GPS can be an effective and efficient support tool when designed to acknowledge the unique needs of each individual. This project is also a great training opportunity for our occupational therapy student researchers studying at our satellite campus in Calgary.”

Partners in this project include the Calgary Police Service, RCMP, the Primary Care Network in Grande Prairie, the Alzheimer Society of Alberta and Northwest Territories, the Alzheimer Society of Calgary, Emergency Medical Services (EMS) and the Seniors Health Strategic Clinical Network within AHS.

Shen Gaidhar’s grandfather-in-law is enrolled in the pilot project. After his wife of 73 years passed away recently, the family was concerned for his safety should he wander away.

“They were always independent and we didn’t want to disrupt that. We didn’t want to take him out of his home but, at the same time, we’re worried that he might wander away from his building and not know how to get home,” she says.

“The locator device gives us all peace of mind.”

The project also supports the development of new and emerging technologies in the field of locator technology within Alberta.

The University of Alberta’s Faculty of Rehabilitation Medicine is a research leader in musculoskeletal health, spinal cord injuries, stuttering, seniors’ health and common spinal disorders. The Faculty of Rehabilitation Medicine aims to improve the quality of life of citizens in our community.

Alberta Health Services is the provincial health authority responsible for planning and delivering health supports and services for more than four million adults and children living in Alberta. Its mission is to provide a patient-focused, quality health system that is accessible and sustainable for all Albertans.

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